



APPLICATION/PERMIT TO CONSTRUCT, OPERATE AND MAINTAIN UTILITY FACILITIES ON HIGHWAY RIGHT-OF-WAY

Wisconsin Department of Transportation
DT1553 8/2022 s. 66.0831, 84.01(31), 84.08, 85.15, 86.07(2)(a), 86.16, 182.017 and other applicable Wis. Stats.

1. Applicant (Utility facility owner) Name and Address		2. Work Start Date	3. Work Finish Date*	6. Public Land Survey System Location (¼ section, section, town, range; provide plat map)	
		4. Is the work due to a WisDOT highway project? ☐ Yes ☐ No		7. Municipal/County Location (List all that apply) County: _____	
		5. Applicant Work Order or Project ID # (If any)			
9. Facility Type (Check all that apply) and Description (Size, material, voltage, pressure, # fibers, etc.)		12. Proposed Work Methods (Check all that apply)		8. Highway (List all that apply) WIS: _____ US: _____ Interstate: _____	
☐ Comm: _____ ☐ Electric: _____ ☐ Gas/Oil: _____ ☐ Water: _____ ☐ Sewer: _____ ☐ Casing: _____ ☐ Conduit: _____ ☐ _____: _____ ☐ Transmission ☐ Service ☐ Distribution ☐ Service (ESCP)		☐ Trench ☐ Plow ☐ Place fill ☐ Rock blasting ☐ Place cable ☐ Open cut in conduit pavement ☐ Hand/mechanical excavation Bore: ☐ Hydraulic (Auger/Jack/Tunnel) ☐ Pneumatic (Mole) ☐ Directional 1 (Manually tracked) ☐ Directional 2 (Computer tracked) ☐ Unknown (At this time)		Provide a separate location map if the plat map is not adequate.	
10. Facility Orientation (Check all that apply)		13. Work Zone Description (Check all that apply). (Provide relevant diagram(s) with application.)			
☐ Underground ☐ Overhead ☐ Crossing ☐ Parallel ☐ OSOW high clearance route ☐ Bridge attachment ☐ Scenic easement (Off right-of-way)		Install or attach to poles/towers: ☐ New ☐ Existing ☐ Guys (~Diameter) (Name of existing owner) (Provide details for all guy wires on plan sheets) Pothole (Subsurface excavation): ☐ Air ☐ Water Tree/vegetation control: ☐ Trim (Prune) ☐ Plant ☐ Remove (Cut) ☐ Mow ☐ Chemically treat		14. Is the facility near a survey monument? HMM 09-15-35 If yes, call (866) 568-2852 or email geodetic@dot.wi.gov . ☐ Yes ☐ No 15. Will appurtenances be installed with the facility? If yes, provide a description and/or specification for each item. ☐ Yes ☐ No 16. Trans 401 category? If Major, provide a formal erosion control plan. HMM 09-15-55 ☐ Major ☐ Minor 17. Is the Environmental Checklist included? See HMM 09-15-16 Attachment 1. WisDOT will not review a permit application until a completed Checklist is submitted. ☐ Yes ☐ No	
11. Work Types (Check all that apply)					
☐ New facility ☐ Remove ☐ Joint install ☐ Maintenance ☐ Improve or ☐ Discontinue, repair existing left in place					

* Includes permanent restoration. If the permitted work has not started by the "Work Finish Date," this permit is null and void. If the permitted work has started but has not been completed by the "Work Finish Date," the work shall not be completed unless authorized through an approved written time extension or a subsequent permit. **ANY PERMIT ISSUED IS REVOCABLE.**

18. Utility Person Responsible for Construction	Telephone Number	It is understood and agreed that WisDOT approval is subject to the applicant's full compliance with all pertinent statutes, as well as any regulations and rules of other jurisdictional agencies (which may be more restrictive), any supplemental permit provisions, and WisDOT's Utility Accommodation Policy , current edition.
19. Utility or Project 24/7 Emergency Contact	Telephone Number	
20. Provide company name and address of utility authorized representative if not employed by the applicant.		(Utility Authorized Representative Signature – If filled via computer, brush script font) (Date)
21. Provide additional work details, if needed (use back page or include separate pages)		(Title) (Telephone Number) (Email Address)
		This permit does not transfer any land, or give, grant or convey any land right, right in land, or easement in WisDOT right-of-way. It is not assignable or transferrable. If the utility facility changes ownership, this permit terminates. The new owner must then obtain a permit to occupy, operate and maintain the facility in WisDOT right-of-way.

↓ Completed by Wisconsin Department of Transportation – REVIEW AFTER PERMIT ISSUANCE ↓

☐ UTILITY SHALL NOTIFY WisDOT REPRESENTATIVE LISTED BELOW 3 DAYS BEFORE STARTING ANY WORK: Region contact, office address, telephone number and email address Wisconsin DOT _____	☐ Review All Supplemental Permit Provisions ☐ Revisions Made to Drawings or Other Pages ☐ Lane Closure System notification required See Provision 6 ☐ Insurance or performance bond required ☐ Joint installation: See permit(s) # _____ ☐ Private utility (Non-public ownership and/or use) ☐ Expedited Service Connection Permit ☐ This permit voids & supersedes # _____ issued: _____ ☐ _____	Application Received
		Application Completed
		Permit Issued
		Permit Extended
		Permit Amended
		Permit Number

(WisDOT Authorized Representative Signature – If filled via computer, Brush Script font)

APPLICATION/PERMIT TO CONSTRUCT, OPERATE AND MAINTAIN UTILITY FACILITIES ON HIGHWAY RIGHT-OF-WAY *(continued)*

Wisconsin Department of Transportation

DT1553

Use this section to provide information that does not fit on front page

INDEMNIFICATION

This Applicant shall save and hold the State, its officers, employees, agents, and all private and governmental contractors and subcontractors with the State under Chapter 84 Wisconsin Statutes harmless, as allowed by Wisconsin law, from actions of any nature whatsoever (including any by Applicant itself) which arise out of, or are connected with, or are claimed to arise out of or be connected with any of the work done by the Applicant, or the construction or maintenance of facilities by the Applicant, pursuant to this permit or any other permit issued by the State for location of property, lines or facilities on highway right-of-way, (1) while the Applicant is performing its work, or (2) while any of the Applicant's property, equipment, or personnel, are in or about such place or the vicinity thereof, or (3) while any property constructed, placed or operated by or on behalf of Applicant remains on the State's property or right-of-way pursuant to this permit or any other permit issued by the State for location of property, lines or facilities on highway right-of-way; including without limiting the generality of the foregoing, all liability, damages, loss expense, claims, demands and actions on account of personal injury, death or property loss to the State, its officers, employees, agents, contractors, subcontractors or frequenters; to the Applicant, its employees, agents, contractors, subcontractors, or frequenters; or to any other persons, whether based upon, or claimed to be based upon, statutory (including, without limiting the generality of the foregoing, worker's compensation), contractual, tort, or whether or not caused or claimed to have been caused by active or inactive negligence or other breach of duty by the State, its officers, employees, agents, contractors, subcontractors or frequenters; Applicant, its employees, agents, contractors, subcontractors or frequenters; or any other person.

Without limiting the generality of the foregoing, the liability, damage, loss, expense, claims, demands and actions indemnified against shall include all liability, damage, loss, expense, claims, demands and actions for damage to any property, lines or facilities placed by or on behalf of the Applicant pursuant to this permit or any other permit issued by the State for location of property, lines or facilities on highway right-of-way in the past or present, or that are located on any highway or State property or right-of-way with or without a permit issued by the State, for any loss of data, information, or material; for trademark, copyright or patent infringement; for unfair competition or infringement of personal or property rights of any kind whatever. The Applicant shall at its own expense investigate all such claims and demands, attend to their settlement or other disposition, defend all actions based thereon and pay all charges of attorneys and all other costs and expenses of any kind arising from any such liability, damage, loss, claims, demands and actions.

Any transfer, whether voluntary or involuntary, of ownership or control of any property constructed, placed or operated by or on behalf of the Applicant that remains on the State's property or right-of-way pursuant to this permit shall not release Applicant from any of the indemnification requirements of this permit, unless the State is notified of such transfer in writing. Any acceptance by any other person or entity, whether voluntary or involuntary, of ownership or control of any property constructed, placed or operated by or on behalf of the Applicant that remains on the State's property or right-of-way pursuant to this permit, shall include acceptance of all of the indemnification requirements of this permit by the other person or entity receiving ownership or control.



SUPPLEMENTAL PERMIT PROVISIONS
City of Greenfield Police Department
Automated License Plate Reader Cameras
Permit #001390 – Issued 11/30/22
WIS 24, 36, 100, 241
City of Greenfield
Milwaukee County



PROJECT DESCRIPTION. The Greenfield Police Department (GPD) is installing automated license plate reader (ALPR) cameras at various locations within City boundaries as an aid for preventing and solving crimes. Six of the ALPR locations are on state highways. One has already been permitted under #001366 on 9/21/22. The use of the cameras is considered a communications-type utility and is allowed under WisDOT's Utility Accommodation Policy [HMM 09-15-65](#), 4.1.

1. **LEGAL USE.** ALPR cameras shall only be used as allowed by Wisconsin statutes. For example, the use of cameras is currently *prohibited* to enforce red light running at traffic signals.
2. **REVOCATION BY WisDOT.** WisDOT may revoke this permit if its own use or sale of the ROW would be facilitated by relocation of GPD's facility and shall provide GPD with written notice a minimum of one year prior to such revocation. During this period, WisDOT shall work with GPD to find a suitable replacement area on ROW near the terminated location. WisDOT shall not compensate GPD to move its facility within the ROW in keeping with WisDOT's policy on compensable and non-compensable utility facility moves. If it is necessary to maintain uninterrupted service, GPD shall be allowed to temporarily locate in WisDOT ROW at a mutually acceptable location for up to 180 days during the relocation of its facilities to the permanent site.
3. **TERMINATION BY PERMITTEE.** GPD may terminate this permit upon 30 days written notice to WisDOT. Upon such termination, GPD shall remove its facility from the ROW unless WisDOT notifies GPD that WisDOT will take over operation and maintenance of the facility for its own traffic operations.
4. **WORK RESTRICTIONS.** GPD is only authorized to work weekdays between the hours of 9AM to 3PM due to high peak traffic volumes. Weekend work may be allowed upon prior approval from WisDOT. No work shall be done, and all work zone traffic control shall be removed, when the pavement is covered with ice or snow, or during winter maintenance pavement brining applications, salt spreading, or plowing operations.
5. **WORK ZONE TRAFFIC CONTROL (WZTC).** All WZTC shall be in accordance with the [Wisconsin Manual on Uniform Traffic Control Devices](#) or the [Work Zone Field Manual](#). The use of a GPD squad car and officer to block a traffic lane is also an acceptable use of WZTC for short-duration installations.
6. **LANE CLOSURE SYSTEM (LCS) REQUIREMENTS.** To satisfy LCS requirements for WisDOT's [511 System](#), GPD shall notify WisDOT a minimum of **seven calendar days** prior to **any lane or shoulder closure**. GPD may use the [LCS Notification Worksheet](#) if needed and submit it to WisDOT's [Thomas Boyke](#) (262) 548-8642 for review. WisDOT may revise the information, but GPD shall enter it into [LCS](#) unless notified by WisDOT that it will perform the entries. For **emergency** situations when any type of shoulder, lane, or road closure is required, GPD shall call WisDOT's [Traffic Management Center](#) at 800-375-7302.

TABLE 108-1 CLOSURE TYPE AND REQUIRED MINIMUM ADVANCE NOTIFICATION TO WISDOT

Closure type with height, weight, or width restrictions (available width, all lanes in one direction < 16')	MINIMUM NOTIFICATION
Lane and shoulder closures	7 calendar days
Full roadway closures	7 calendar days
Ramp closures	7 calendar days
Detours	7 calendar days
Closure type without height, weight, or width restrictions (available width, all lanes in one direction ≥ 16')	MINIMUM NOTIFICATION
Lane and shoulder closures	3 business days
Ramp closures	3 business days
Modifying all closure types	3 business days

7. **WORK AREA PROTECTION DURING NON-WORK TIMES.** GPD shall store its equipment and materials off the ROW during non-work times if possible. If necessary, GPD may store its equipment and materials on the ROW provided they are placed as close to the ROW line as possible and outside of the clear zone. GPD shall ensure that any excavation left open during non-work times is well marked and secured from public intrusion.
8. **LONGITUDINAL & VERTICAL LOCATION.** GPD shall place its facilities as shown on the approved permit drawings. Deviations from this location may be allowed but shall first be approved by WisDOT. Revised plan sheets showing the approved deviations should be sent to WisDOT after completion.
9. **ROW RESTORATION.** GPD shall restore any WisDOT ROW disturbed to its original (as best as practical) condition within **two weeks** after installing its facilities. WisDOT may allow time extensions for restoration in the case of inclement weather, poor soil conditions, or if GPD's operations would track over the same disturbed areas – provided that proper erosion control devices are in place to protect the disturbed areas.

Should future maintenance work on GPD's facilities result in the disturbance of the existing ROW, GPD shall restore the ROW to its original condition as soon as possible. The basic drainage pattern of the highway shall remain undisturbed by the permitted work. Upon project completion, all spoils, debris, refuse, and waste resulting from the permitted work shall be removed from the work site.

10. **EROSION CONTROL.** A formal erosion control plan is not required if GPD can perform construction in accordance with [HMM 09-15-55](#) and [Trans 401](#). However, if any excavation remains open for more than 24 hours, then a formal erosion control plan shall be submitted to WisDOT and this provision revised accordingly. In either case, GPD shall use the appropriate erosion control best management practices (BMPs) to contain soil directly at the site to prevent disturbed soil from getting into nearby waterways and wetlands. Storm sewer and pipe underdrain inlets shall be protected with filter fabric if necessary.

All appropriate erosion control BMPs shall be in place **prior to starting construction activities**. Temporary seeding shall be used as necessary after rough grading and before project completion. GPD shall ensure that erosion control measures used to protect restored areas remain in place until replacement vegetation achieves sustained growth. Rutting due to vehicle or equipment tracks shall be smoothed out at the end of each day. GPD shall take every precaution necessary to prevent mud, dirt, or other debris from being deposited onto a lane or shoulder of WIS 241. Any materials deposited on the pavement shall be promptly removed.

11. **CONSTRUCTION NOTICES.** GPD shall call or [email](#) the Southeast Region utility permit engineer, Chue Hang, 262-521-4461 at least three working days prior to the start of construction.

GPD shall call Diggers' Hotline 800-242-8511 at least three working days prior to the start of any excavation.

GPD shall provide WisDOT with the names and telephone numbers of the people in charge of its field operations. This includes people who are responsible for the overall project or separate crews and includes any contractors hired by GPD. Field personnel shall have cellular phones that would enable a WisDOT representative to contact them at any time.

12. **PERMIT AT SITE.** During the performance of work described in this permit, GPD and/or its contractor(s) or subcontractor(s) shall have a fully signed and executed copy of the permit on site, **which may in electronic format**. Failure to do so may cause a temporary shutdown of the work. Repeated offenses may cause this permit to become null and void and if so, the work shall not be completed unless authorized through a subsequent permit.

This permit is subject to the attached drawings, these supplemental provisions, and WisDOT's *Utility Accommodation Policy*. New supplemental provisions may be added, or the existing ones deleted or amended in the future as different issues arise during the installation, operation, and maintenance of the permittee's facilities.

Lane Closure System (LCS) Notification Worksheet
(Permittee will enter the data into the LCS)



General Section:

1. Permit Number
2. General Description (brief description of the type of work)
3. County (Begin/End if different)
4. Highway/Direction
5. Primary Contact (WisDOT Regional Permit Coordinator)
6. Emergency Traffic Control Contractor Contact (name/number: 24-hour contact)
7. Secondary Contact (other WisDOT contact names if applicable)
8. Law Enforcement Contact (if applicable)
9. Other Contact (such as contractor or utility name/number)

Each Facility:

1. Type (mainline, ramp, bridge, system interchange)
2. Closure/Restriction (lanes/shoulders affected)
3. Duration (daily/nightly, weekly, continuous, long term)
4. Begin/End Date
5. Begin/End Time
6. Begin/End Location
7. Oversize/Overweight Restrictions (height, width, weight restrictions if applicable)
8. Detour Route (if applicable)

WI46 T6N R21E SN24

State

Meridian

Township

Range

Section

Wisconsin

Fourth Extended

6N

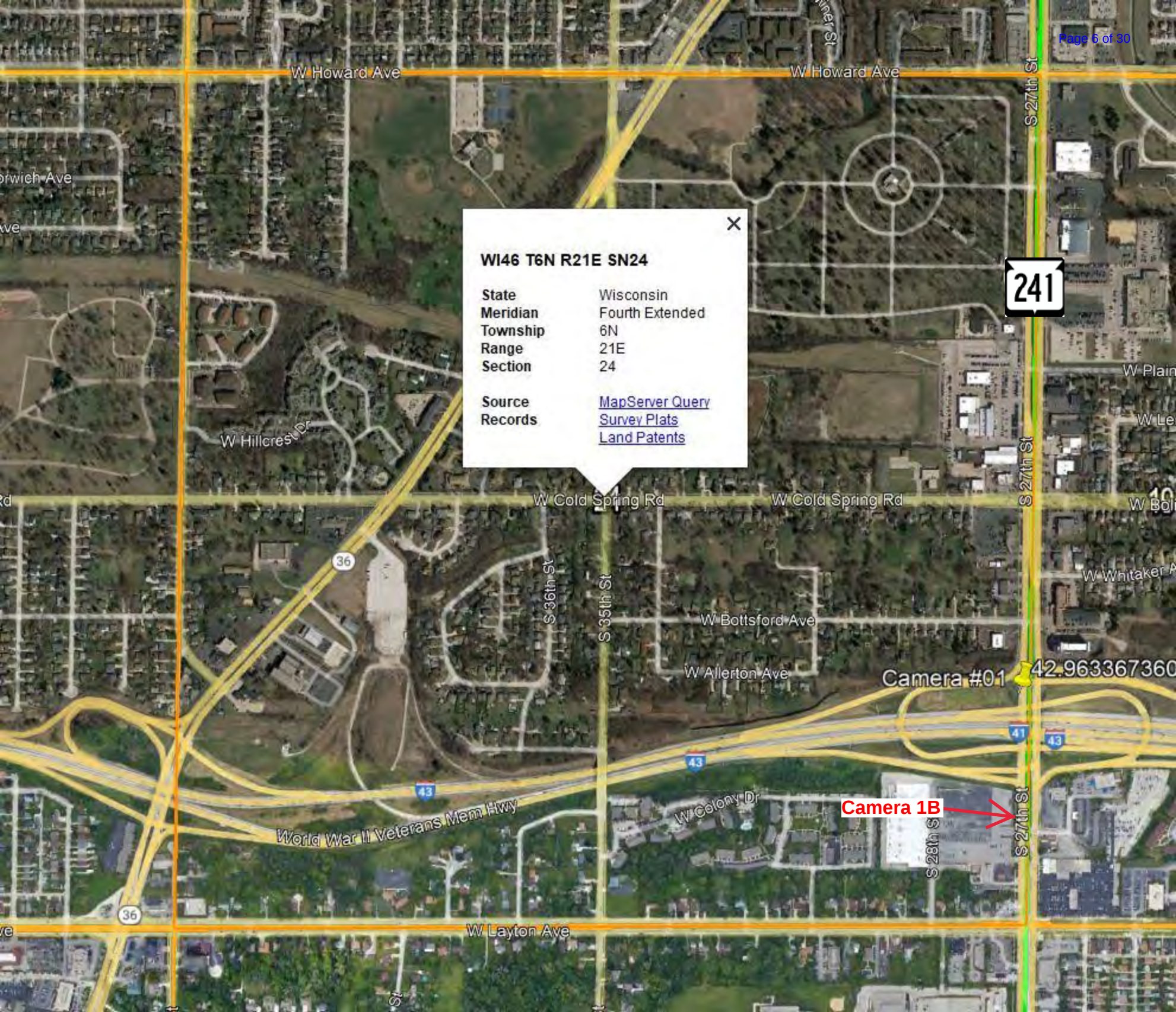
21E

24

Source

Records

[MapServer Query](#)
[Survey Plats](#)
[Land Patents](#)



Camera 1B

Camera #01

42.963367360

241

World War II Veterans Mem Hwy

W Layton Ave

W Howard Ave

W Cold Spring Rd

W Bottsford Ave

W Allerton Ave

W Colony Dr

W Hillcrest Dr

W Plain

W Le

W Bol

W Whitaker A

brwich Ave

we

Rd

ve

St

S 27th St

S 27th St

S 27th St

S 28th St

S 35th St

S 36th St

36

43

43

41

43

X

WI46 T6N R21E SN29

State	Wisconsin
Meridian	Fourth Extended
Township	6N
Range	21E
Section	29

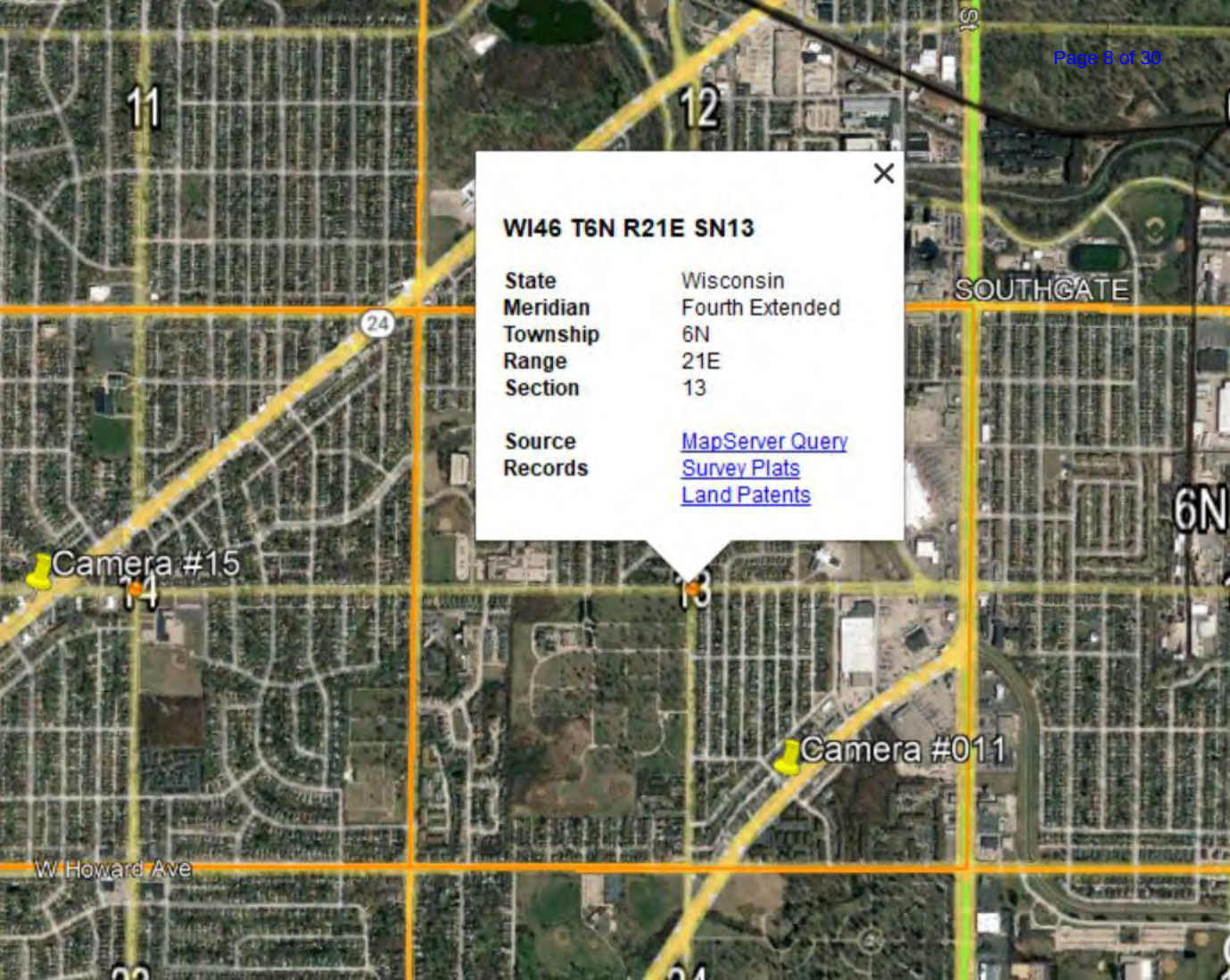
Source	MapServer Query
Records	Survey Plats
	Land Patents

Camera #09

W Edgerton Ave

100

W Grange Ave

**WI46 T6N R21E SN13**

State	Wisconsin
Meridian	Fourth Extended
Township	6N
Range	21E
Section	13

Source	MapServer Query
Records	Survey Plats
	Land Patents

Camera #15

Camera #011

W Howard Ave

WI46 T6N R21E SN26

State	Wisconsin
Meridian	Fourth Extended
Township	6N
Range	21E
Section	26

Source	MapServer Query
Records	Survey Plats Land Patents

Camera #12

36

36

W Grange Ave

W Edgerton Ave

W Loomis Rd

WI46 T6N R21E SN14

State	Wisconsin
Meridian	Fourth Extended
Township	6N
Range	21E
Section	14

Source	MapServer Query
Records	Survey Plats Land Patents

Camera 15

W Morgan Ave

ALVERNO

S 43rd St

GREEN MOOR

HONEY CREEK MANOR

Flock Safety Tech Specs

License plate reading cameras that capture more evidence for your city.



Dual Solar Panels

- Voltage: 18-20V
- Weight: 25.73 lbs (with hardware)
- Length: 21.25"
- Width: 28"
- Mount: Pole top or side of existing pole

Pole

- DOT breakaway pole - 12' installed height
- Diameter: 2.875" OD, 2.125" ID
- Material: 6061 Aluminum w/ black coating
- Alloy: 6061
- Weight: 32 lbs

Camera

- Length: 10.5"
- Height: 4.5"
- Depth: 5.5"
- Mounting: Adjustable band clamps
- Weight: 3.6 lbs
- Footage: Uploads via LTE
- Capture Distance: 20-90ft from vehicle
- Deployment Distance: Up to 25' from edge of roadway
- Resolution: 2508x2048
- Vehicle Speed: up to 100 MPH
- Assembly: Flock Safety in Atlanta, GA



Install Anywhere



Solar &
Existing Pole



Solar &
Flock Pole



Electric &
Existing Pole



GREENFIELD
POLICE DEPARTMENT
LICENSE PLATE READER
INSTALLATION

JURISDICTION:
WISCONSIN DEPARTMENT
OF TRANSPORTATION

SITE IDENTIFICATION

GREENFIELD
POLICE DEPARTMENT
5300 W LAYTON AVE,
GREENFIELD, WI 53220
(414) 761-5350



FLOCK SAFETY
1170 HOWELL MILL ROAD NW
SUITE 210
ATLANTA, GA 30318
PERMIT@FLOCKSAFETY.COM
415-669-0341



KIMLEY-HORN AND ASSOCIATES, INC.
817 W PEACHTREE STREET, SUITE 601
ATLANTA, GA 30308 PHONE: (312) 401-6614
ATTN.: TRACY LEHMAN, P.E.

PROJECT TEAM

INSTALLATION OF NEW POLE IN EXISTING RIGHT OF WAY SUPPORTING
LICENSE PLATE READER CAMERA FOR THE GREENFIELD POLICE
DEPARTMENT.

PROJECT SUMMARY



VICINITY MAP

SHEET #	SHEET TITLE	DRAWN BY
T.01	TITLE SHEET	RCG
T.02	SYMBOLGY AND ABBREVIATIONS	RCG
S.01-S.05	SITE PLANS	RCG
D.01-D.04	EQUIPMENT AND FOUNDATION DETAILS	RCG
TC.01-TC.05	TRAFFIC CONTROL PLANS	RCG

SHEET INDEX



PROJECT INFORMATION:

GREENFIELD
POLICE DEPARTMENT
LICENSE PLATE READER
INSTALLATION

PLANS PREPARED BY:



817 WEST PEACHTREE STREET,
NW, SUITE 601,
ATLANTA, GA 30308
PHONE: (404) 419-8700
WWW.KIMLEY-HORN.COM

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1	11/18/22	PERMITTING	TLL
0	10/12/22	PERMITTING	TLL

LICENSER:



KHA PROJECT NUMBER:

014681000.1.304

DRAWN BY: CHECKED BY:

RCG

TLL

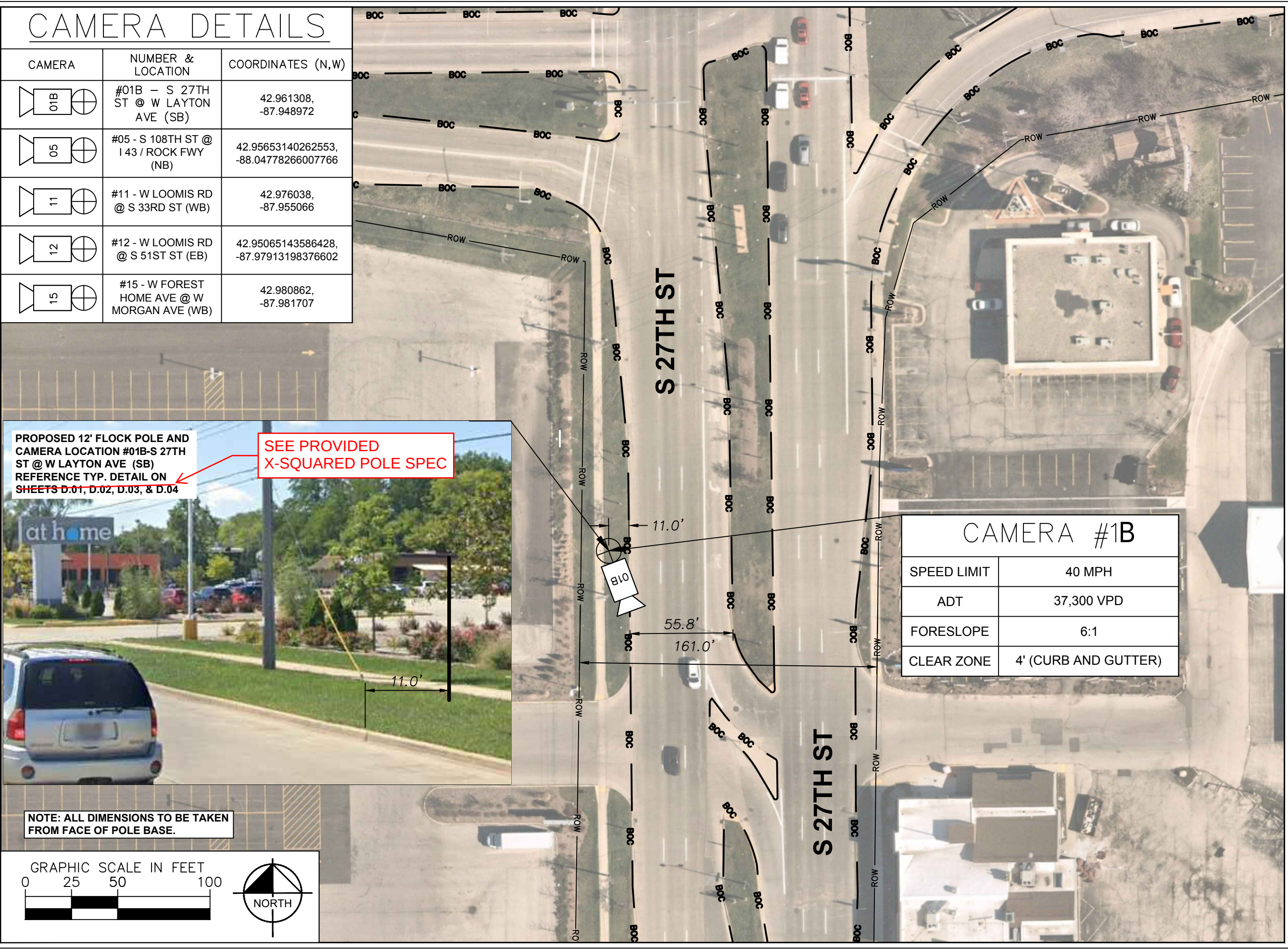
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TITLE SHEET

SHEET NUMBER:

T.01

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flock safety

PROJECT INFORMATION:

GREENFIELD POLICE DEPARTMENT

LICENSE PLATE READER

INSTALLATION

PLANS PREPARED BY:

KimleyHorn

817 WEST PEACHTREE STREET,
NW, SUITE 601,
ATLANTA, GA 30308
PHONE: (404) 419-8700
WWW.KIMLEY-HORN.COM

REV: DATE: ISSUED FOR: BY:

8

7

6

5

4

3

2

1 11/18/22 PERMITTING TLL

0 10/12/22 PERMITTING TLL

LICENSER:

WISCONSIN

MICHAEL R DOOLITTLE

E-46398

CARY

PROFESSIONAL ENGINEER

11/18/2022

KHA PROJECT NUMBER:

014681000.1.304

DRAWN BY: CHECKED BY:

RCG TLL

SHEET TITLE:

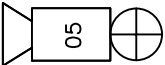
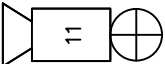
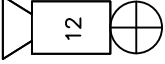
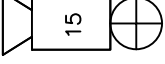
SITE PLAN

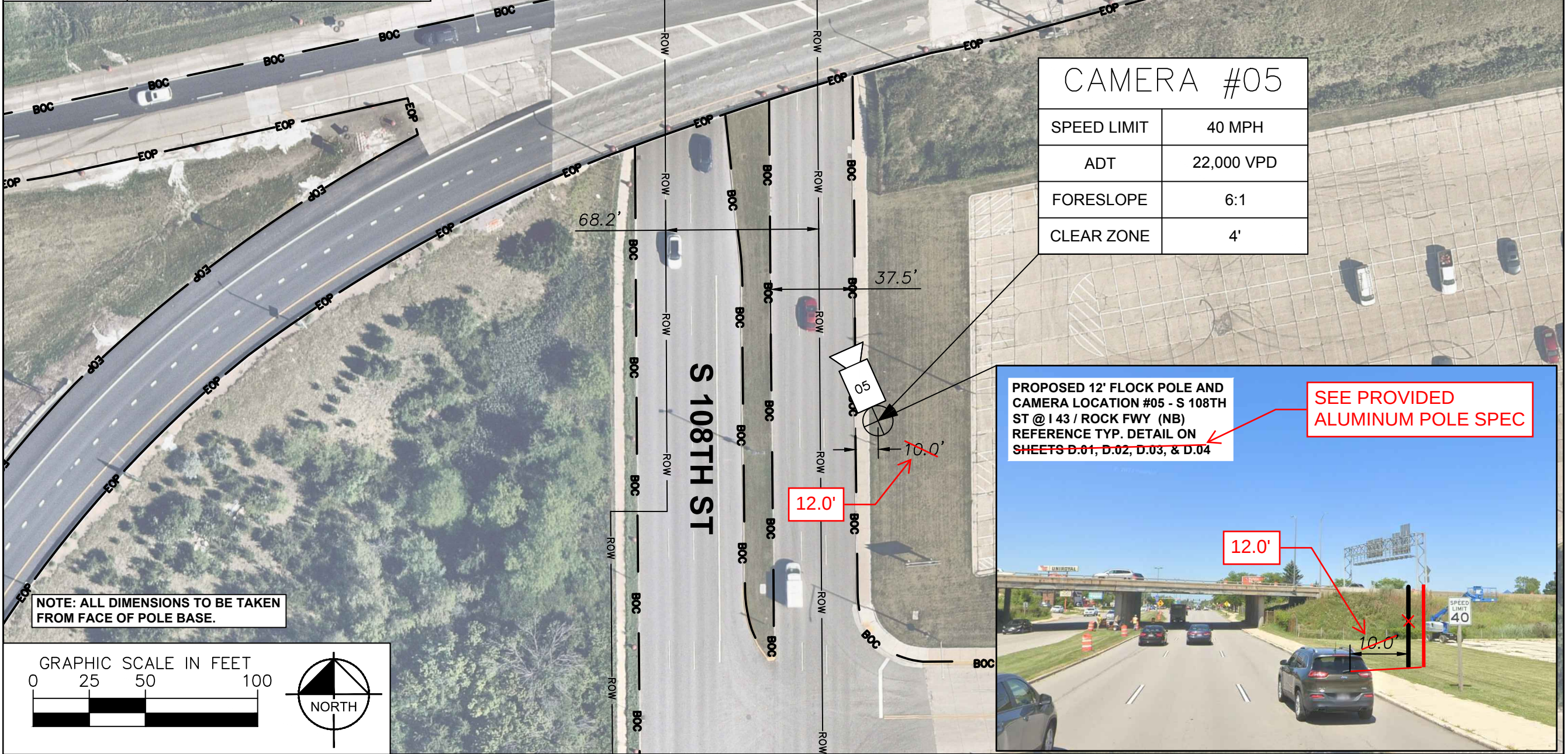
SHEET NUMBER:

S.01

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K:\ATL_Wireless\Flock\237643\1 - KHATL - XXXX - FLOCK - CD\CASE\237643_FLOCK_CD.dwg ----- 11/18/22 7:45 AM by: greg.vanmadaren

CAMERA DETAILS		
CAMERA	NUMBER & LOCATION	COORDINATES (N,W)
 01B	#01B - S 27TH ST @ W LAYTON AVE (SB)	42.961308, -87.948972
 05	#05 - S 108TH ST @ I 43 / ROCK FWY (NB)	42.95653140262553, -88.04778266007766
 11	#11 - W LOOMIS RD @ S 33RD ST (WB)	42.976038, -87.955066
 12	#12 - W LOOMIS RD @ S 51ST ST (EB)	42.95065143586428, -87.97913198376602
 15	#15 - W FOREST HOME AVE @ W MORGAN AVE (WB)	42.980862, -87.981707





PROJECT INFORMATION:

GREENFIELD
POLICE DEPARTMENT
LICENSE PLATE READER
INSTALLATION

PLANS PREPARED BY:


817 WEST PEACHTREE STREET,
NW, SUITE 601,
ATLANTA, GA 30308
PHONE: (404) 419-8700
WWW.KIMLEY-HORN.COM

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4			
3			
2			
1	11/18/22	PERMITTING	TLL
0	10/12/22	PERMITTING	TLL

LICENSER:



KHA PROJECT NUMBER:

014681000.1.304

DRAWN BY: CHECKED BY:

RCG TLL

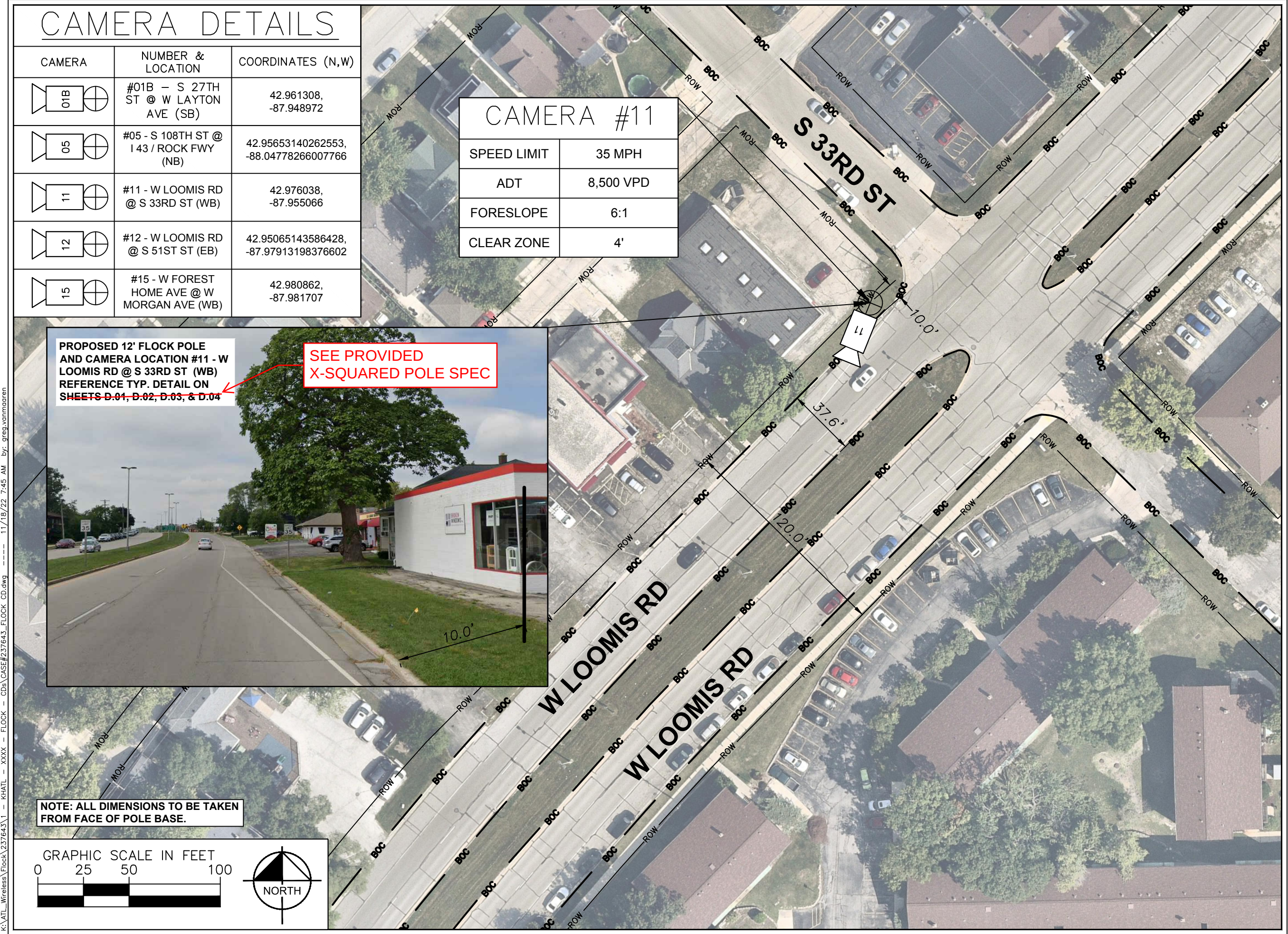
SHEET TITLE:

SITE PLAN

SHEET NUMBER:

S.02

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CAMERA DETAILS

CAMERA	NUMBER & LOCATION	COORDINATES (N,W)
	#01B - S 27TH ST @ W LAYTON AVE (SB)	42.961308, -87.948972
	#05 - S 108TH ST @ I 43 / ROCK FWY (NB)	42.95653140262553, -88.04778266007766
	#11 - W LOOMIS RD @ S 33RD ST (WB)	42.976038, -87.955066
	#12 - W LOOMIS RD @ S 51ST ST (EB)	42.95065143586428, -87.97913198376602
	#15 - W FOREST HOME AVE @ W MORGAN AVE (WB)	42.980862, -87.981707

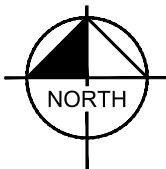
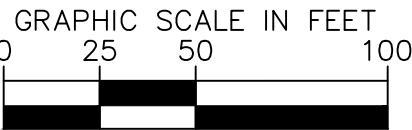
CAMERA #11

SPEED LIMIT	35 MPH
ADT	8,500 VPD
FORESLOPE	6:1
CLEAR ZONE	4'

PROPOSED 12' FLOCK POLE AND CAMERA LOCATION #11 - W LOOMIS RD @ S 33RD ST (WB) REFERENCE TYP. DETAIL ON SHEETS D-01, D-02, D-03, & D-04

SEE PROVIDED X-SQUARED POLE SPEC

NOTE: ALL DIMENSIONS TO BE TAKEN FROM FACE OF POLE BASE.



flock safety

PROJECT INFORMATION:

GREENFIELD
POLICE DEPARTMENT
LICENSE PLATE READER
INSTALLATION

PLANS PREPARED BY:

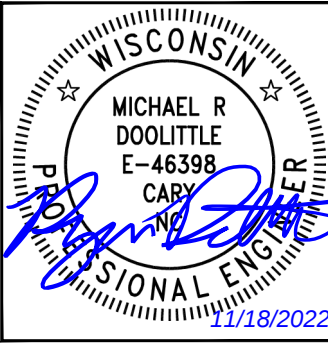
KimleyHorn

817 WEST PEACHTREE STREET,
NW, SUITE 601,
ATLANTA, GA 30308
PHONE: (404) 419-8700
WWW.KIMLEY-HORN.COM

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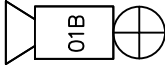
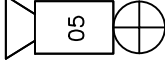
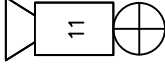
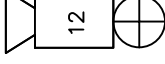
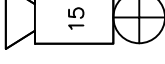
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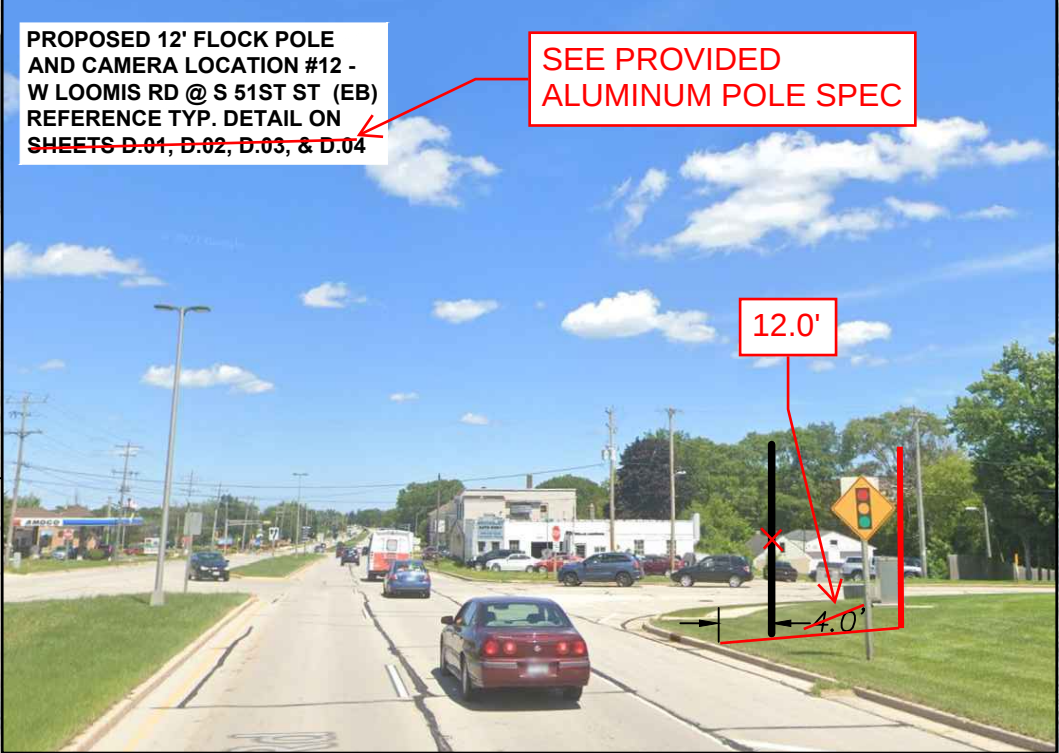
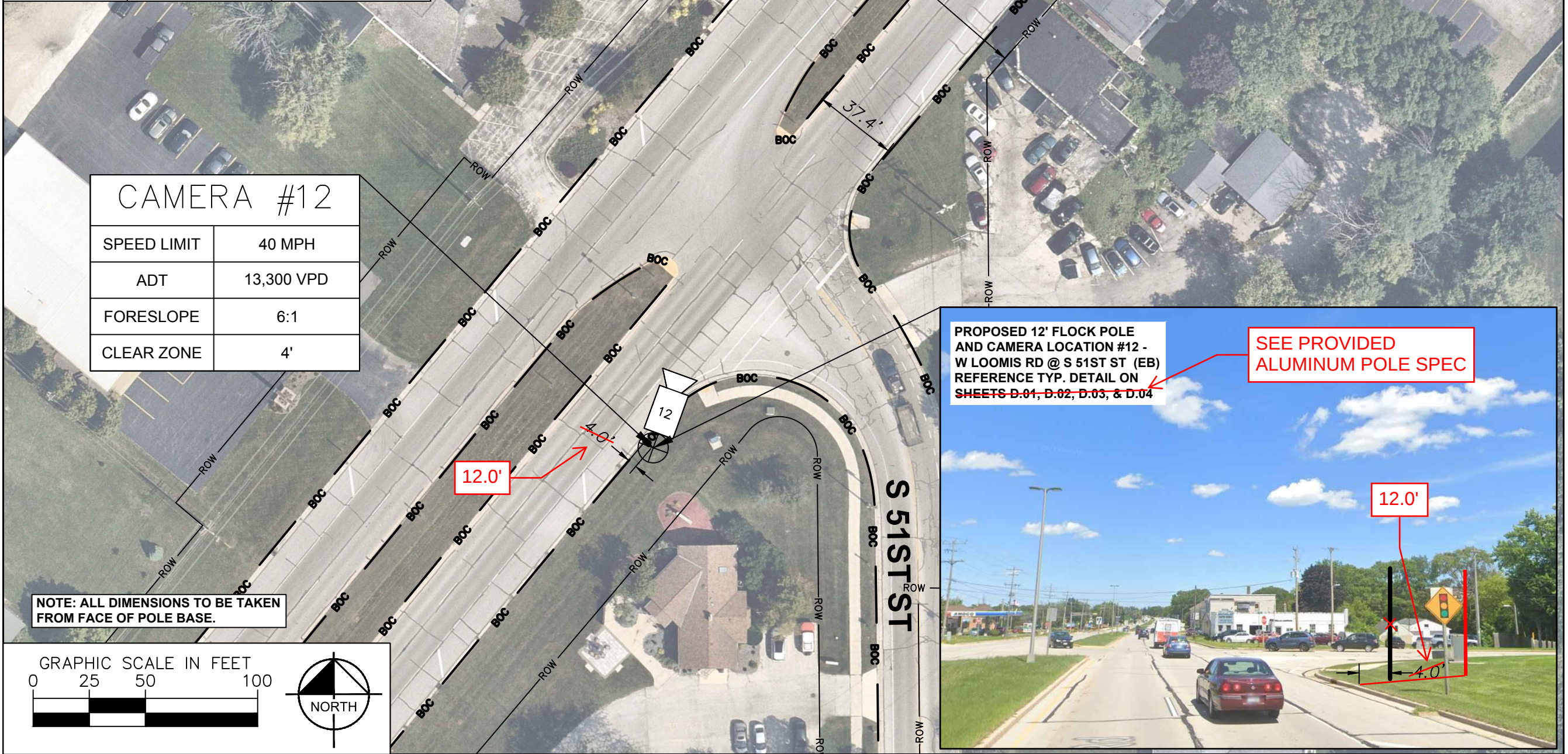
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S.03

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CAMERA DETAILS		
CAMERA	NUMBER & LOCATION	COORDINATES (N,W)
 01B	#01B - S 27TH ST @ W LAYTON AVE (SB)	42.961308, -87.948972
 05	#05 - S 108TH ST @ I 43 / ROCK FWY (NB)	42.95653140262553, -88.04778266007766
 11	#11 - W LOOMIS RD @ S 33RD ST (WB)	42.976038, -87.955066
 12	#12 - W LOOMIS RD @ S 51ST ST (EB)	42.95065143586428, -87.97913198376602
 15	#15 - W FOREST HOME AVE @ W MORGAN AVE (WB)	42.980862, -87.981707





PROJECT INFORMATION:

GREENFIELD
POLICE DEPARTMENT
LICENSE PLATE READER
INSTALLATION

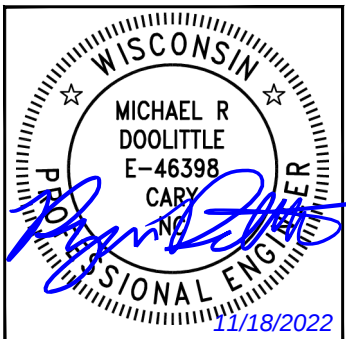
PLANS PREPARED BY:


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KHA PROJECT NUMBER:

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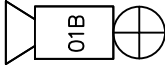
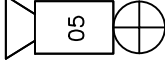
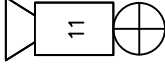
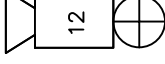
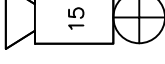
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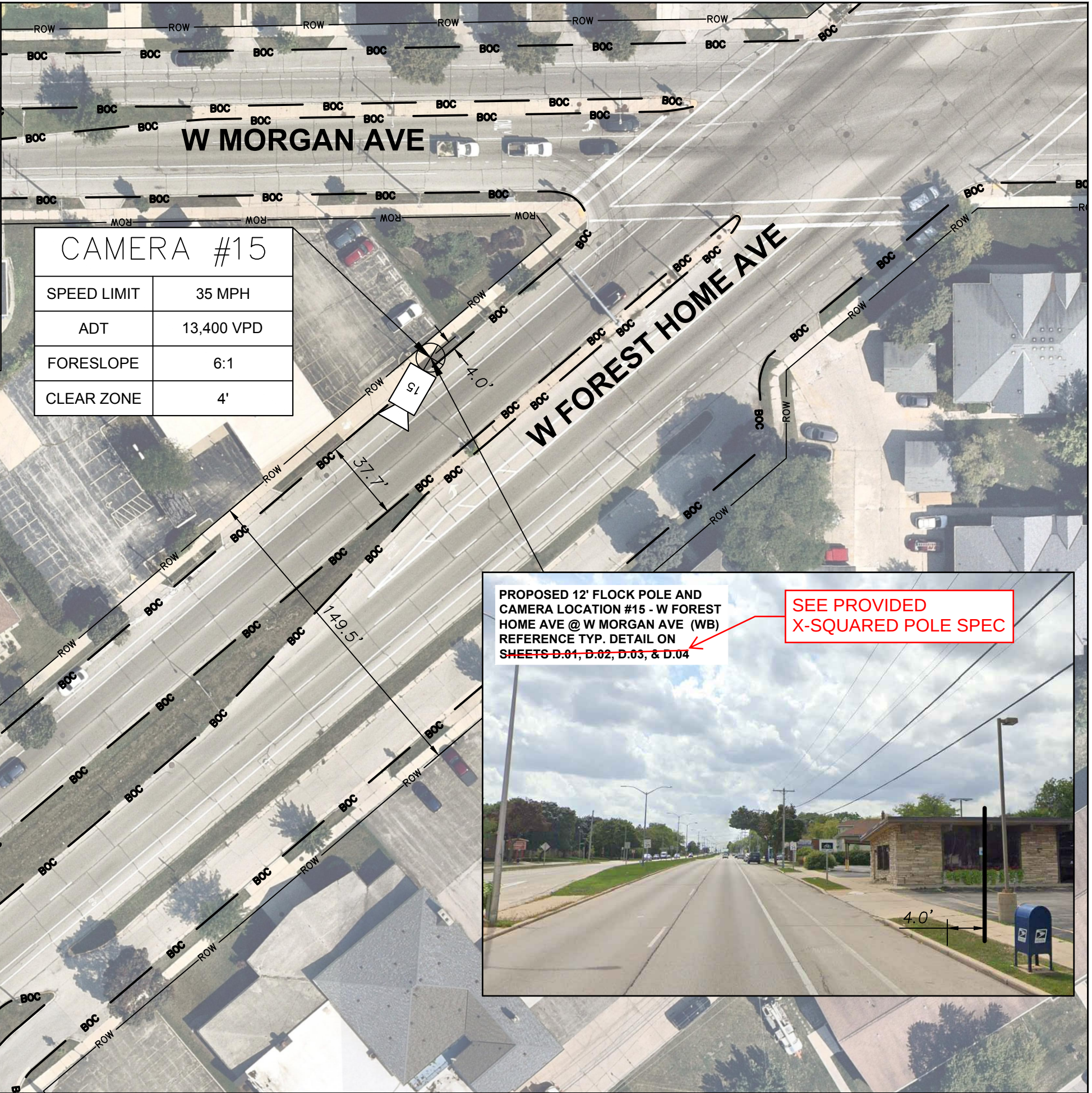
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CAMERA DETAILS		
CAMERA	NUMBER & LOCATION	COORDINATES (N,W)
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	#05 - S 108TH ST @ I 43 / ROCK FWY (NB)	42.95653140262553, -88.04778266007766
	#11 - W LOOMIS RD @ S 33RD ST (WB)	42.976038, -87.955066
	#12 - W LOOMIS RD @ S 51ST ST (EB)	42.95065143586428, -87.97913198376602
	#15 - W FOREST HOME AVE @ W MORGAN AVE (WB)	42.980862, -87.981707





PROJECT INFORMATION:

GREENFIELD
POLICE DEPARTMENT
LICENSE PLATE READER
INSTALLATION

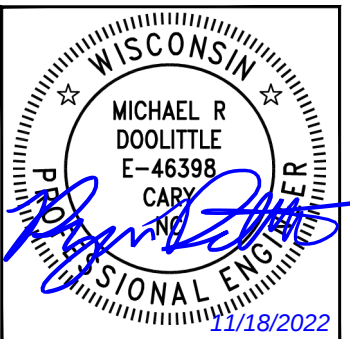
PLANS PREPARED BY:


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SHEET TITLE:

SITE PLAN

SHEET NUMBER:

S.05

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GENERAL NOTES:

1. ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND FLOCK SAFETY PROJECT SPECIFICATIONS.
2. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
3. THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR ARE TO BE RESPONSIBLE FOR VERIFYING EXISTING SITE CONDITIONS, DIMENSIONS, AND THE LOCATION OF BURIED UTILITIES AT THE JOB SITE PRIOR TO THE COMMENCEMENT OF WORK. NO CLAIMS FOR EXTRA COMPENSATION FOR WORK RESULTING FROM CONFLICTS AND OMISSIONS WHICH COULD HAVE BEEN DISCOVERED BY FIELD VERIFICATION AND INSPECTION, WHETHER INDICATED IN THE CONTRACT DOCUMENTS OR NOT WILL BE ENTERTAINED OR PAID.
4. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GENERAL CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF WORK.
5. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
7. PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS THE MINIMUM REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS, SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK AND PREPARED BY THE ENGINEER PRIOR TO PROCEEDING WITH WORK.
8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFIRM TO ALL OSHA REQUIREMENTS AND THE LOCAL JURISDICTION.
10. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
11. FLOCK SAFETY AND CONTRACTOR ARE SOLELY RESPONSIBLE FOR DETERMINATION AND CONFIRMATION THAT THE PROPOSED POLE LOCATION IS WITHIN THE PUBLIC RIGHT OF WAY. SITE PLAN AND ALL REPRESENTATION OF RIGHT OF WAY PROPERTY LINES ARE APPROXIMATE BY NATURE AND HAVE BEEN PRODUCED WITHOUT THE BENEFIT OF A PROFESSIONAL LAND SURVEY.

TRAFFIC CONTROL NOTES:

1. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH APPLICABLE LAYOUTS FROM THE MOST RECENT VERSION OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION (WISDOT) WISCONSIN WORK ZONE FIELD MANUAL (<https://wisconsin.dot.gov/dtsdmanuals/traffic-ops/manuals-and-standards/wzfm/wzfm.pdf>) AND IN ACCORDANCE WITH THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD).
2. CONTRACTOR SHALL MEET THE TRAFFIC CONTROL DEVICE QUALITY STANDARDS AS REQUIRED IN THE FIELD MANUAL AND SHALL IMMEDIATELY REPLACE UNACCEPTABLE TRAFFIC CONTROL DEVICES. SIGNS THAT ARE DIRTY AND RESULT IN A NOTICEABLE LOSS OF REFLECTIVITY AT NIGHT ARE CONSIDERED UNACCEPTABLE AND MUST BE CLEANED OR REPLACED.
3. CONTRACTOR SHALL RESPOND PROMPTLY TO ANY CALL FROM THE ENGINEER CONCERNING THE NOTIFICATION OF UNACCEPTABLE TRAFFIC CONTROL DEVICES.
4. LAYOUTS FROM THE WISCONSIN WORK ZONE FIELD MANUAL ANTICIPATED TO BE UTILIZED, BUT MAY NOT BE FULLY INCLUSIVE OF ALL APPLICABLE LAYOUTS, INCLUDE LAYOUT 6, 15, 38, 52, 53 AND 71.

LEGEND

	EXISTING EASEMENT
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	EDGE OF PAVEMENT
	RIGHT OF WAY
	EXISTING WATER LINE
	EXISTING FIRE WATER LINE
	EXISTING IRRIGATION WATER LINE
	EXISTING SANITARY SEWER LINE
	EXISTING STORM DRAIN LINE
	EXISTING UNDERGROUND ELECTRIC LINE
	EXISTING GAS LINE
	EXISTING TELECOMMUNICATIONS LINE
	EXISTING UNKNOWN UTILITY LINE
	WATER VALVE
	FIRE HYDRANT
	IRRIGATION VALVE
	SEWER MANHOLE
	SEWER CLEAN OUT
	STORM DRAIN MANHOLE
	GRATED INLET
	CATCH BASIN
	LIGHT POST
	ELECTRIC PULLBOX / E BOX
	UTILITY VAULT
	GAS VALVE
	TREE
	SIGN
	BOLLARD
	DECORATIVE CONCRETE BALL
	HANDICAP PARKING
	GREASE TRAP
	COMMUNICATION VAULTS
	SURVEY CONTROL POINTS
	MISCELLANEOUS MANHOLES
	LICENSE PLATE READER CAMERA

flock safety

PROJECT INFORMATION:

GREENFIELD
POLICE DEPARTMENT
LICENSE PLATE READER
INSTALLATION

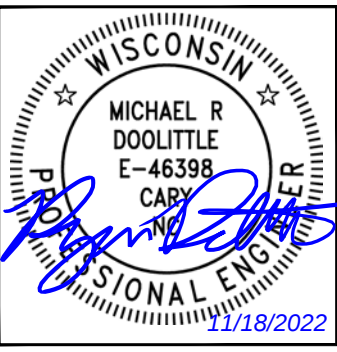
PLANS PREPARED BY:

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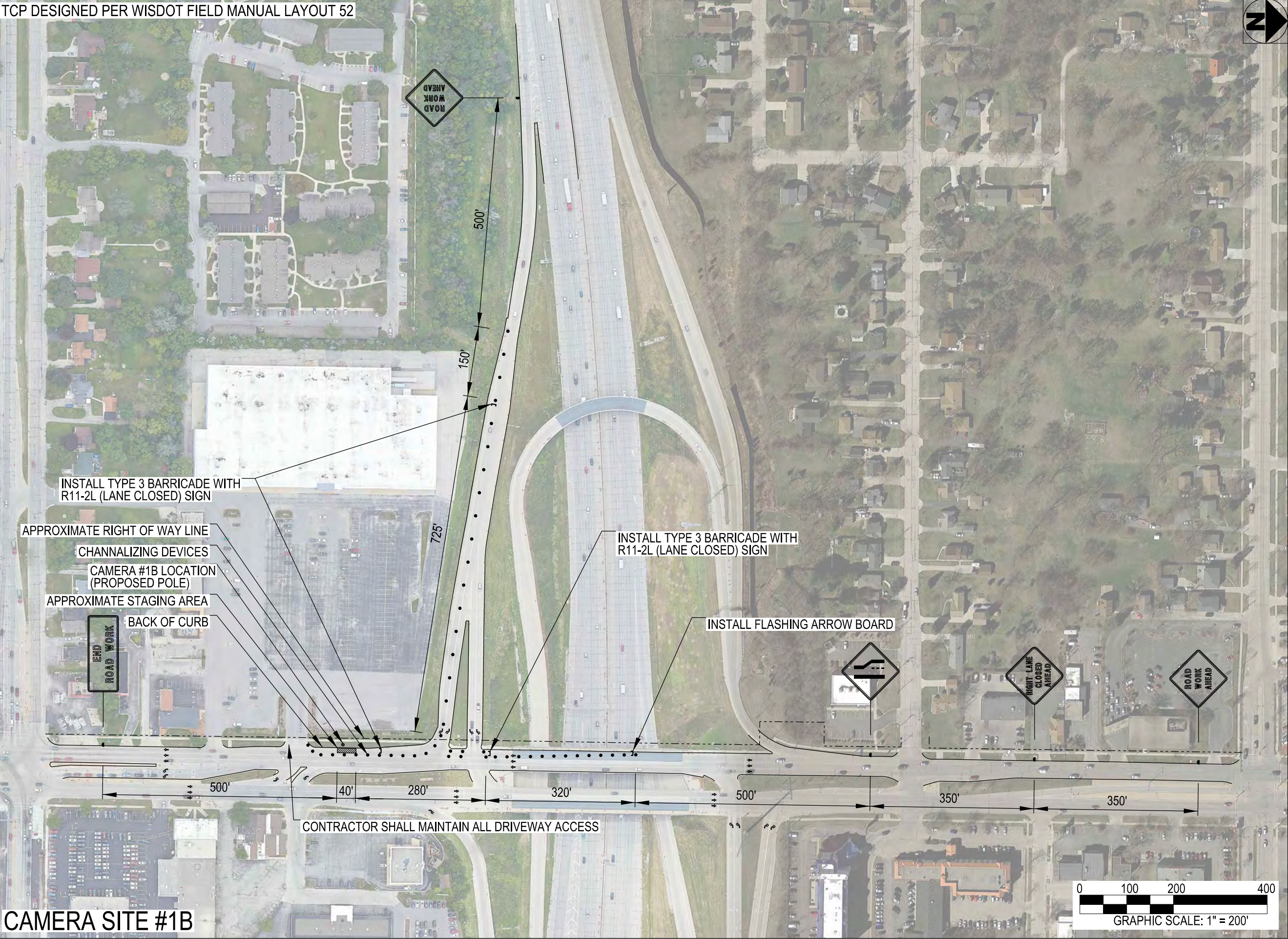
SHEET TITLE:

SYMBOLGY AND
ABBREVIATIONS

SHEET NUMBER:

T.02

TCP DESIGNED PER WISDOT FIELD MANUAL LAYOUT 52



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PROJECT INFORMATION:

GREENFIELD
POLICE DEPARTMENT
LICENCE PLATE READER
TRAFFIC CONTROL PLANS

PLANS PREPARED BY:

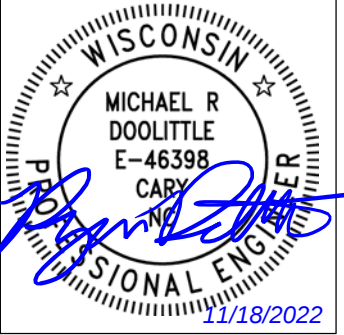
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LICENSER:



KHA PROJECT NUMBER:

014681000.1.304

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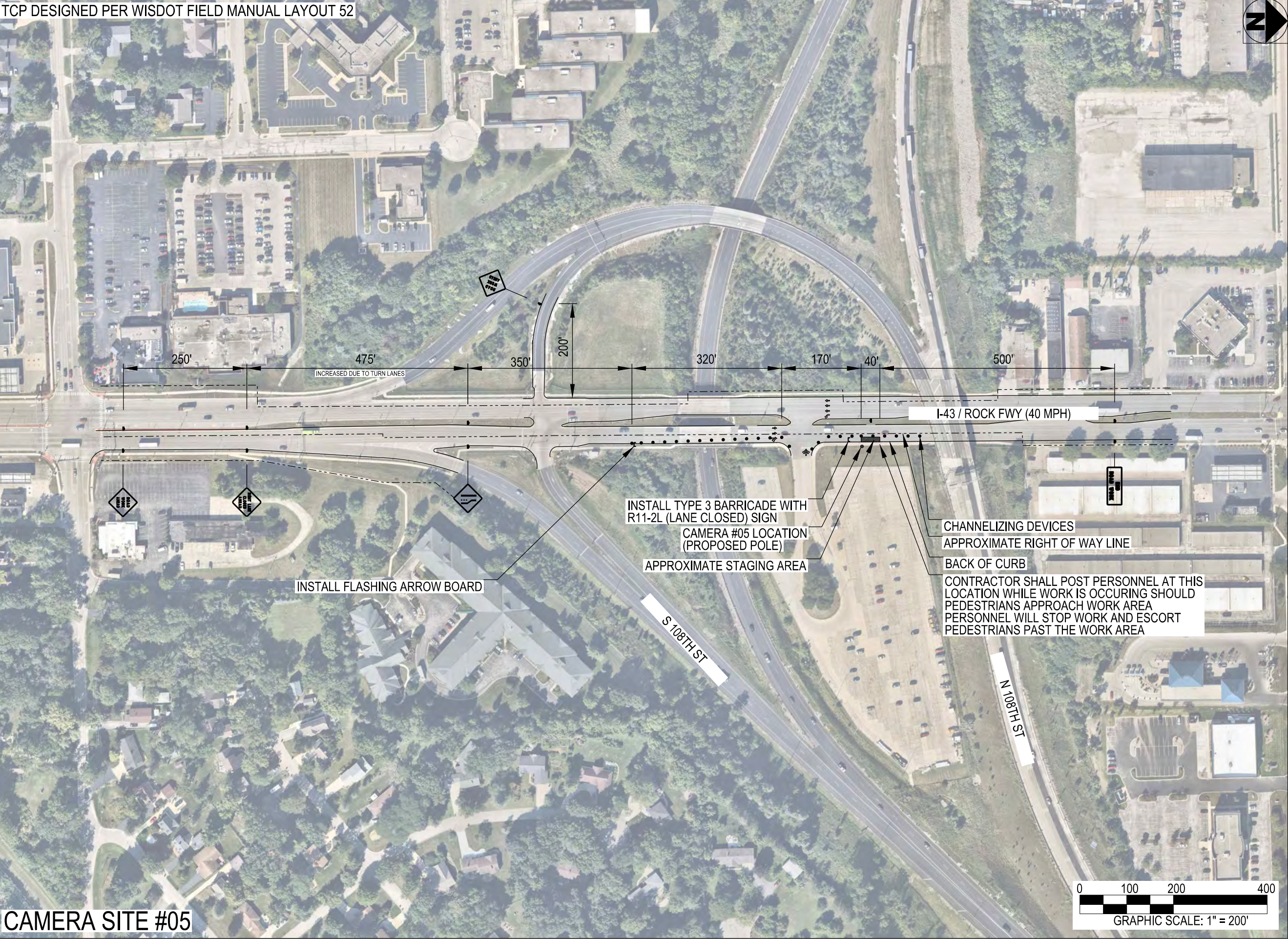
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TRAFFIC CONTROL
PLAN

SHEET NUMBER:

TC.01

TCP DESIGNED PER WISDOT FIELD MANUAL LAYOUT 52



CAMERA SITE #05

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PROJECT INFORMATION:

GREENFIELD
POLICE DEPARTMENT
LICENCE PLATE READER
TRAFFIC CONTROL PLANS

PLANS PREPARED BY:

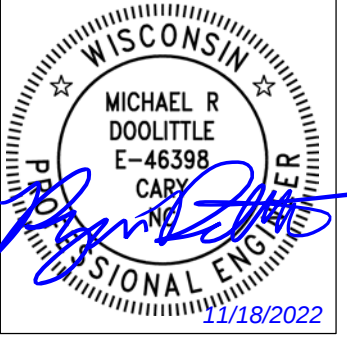
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KHA PROJECT NUMBER:

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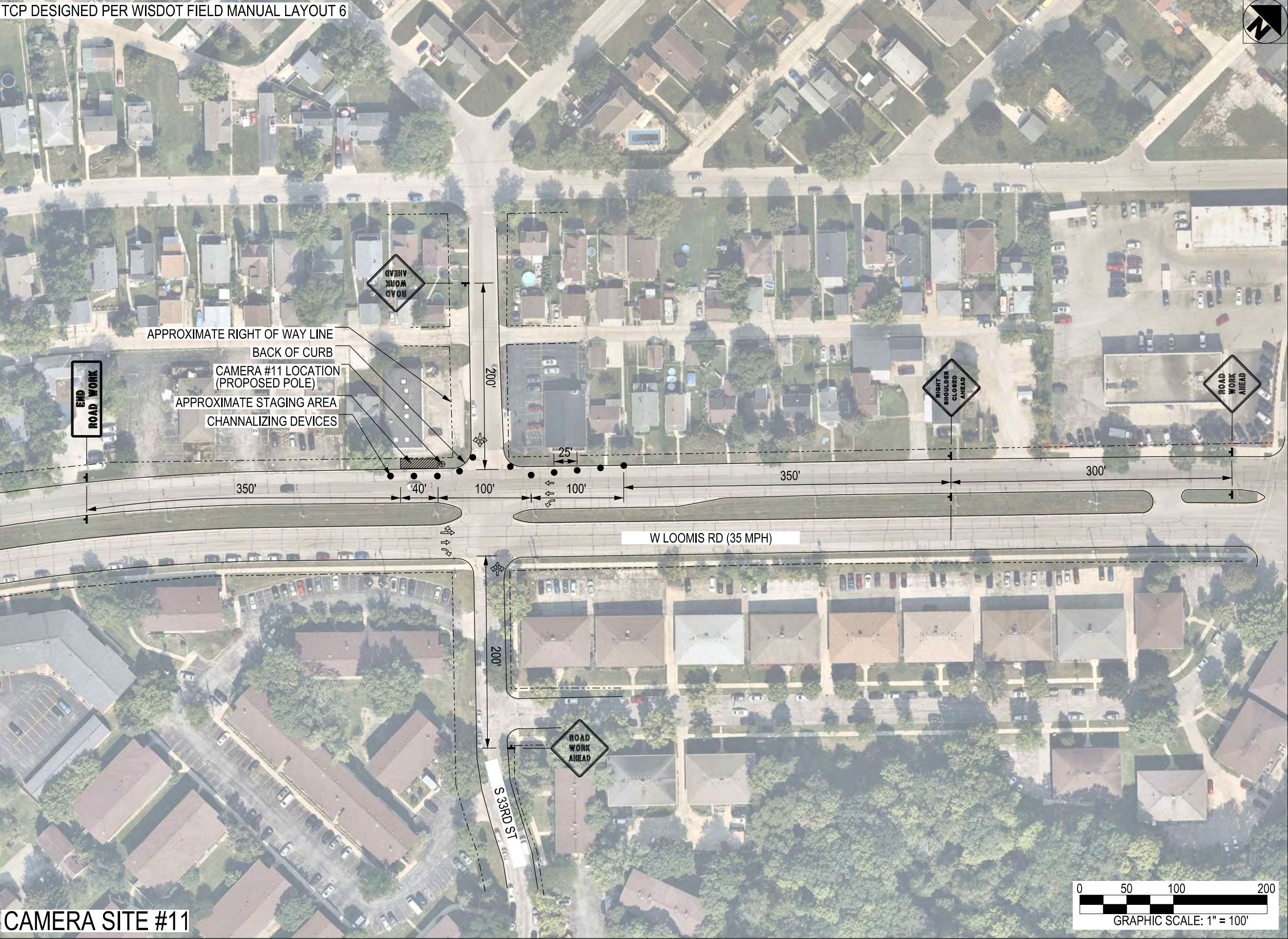
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TRAFFIC CONTROL
PLAN

SHEET NUMBER:

TC.02

TCP DESIGNED PER WISDOT FIELD MANUAL LAYOUT 6



CAMERA SITE #11

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PROJECT INFORMATION:

GREENFIELD
POLICE DEPARTMENT
LICENCE PLATE READER
TRAFFIC CONTROL PLANS

PLANS PREPARED BY:

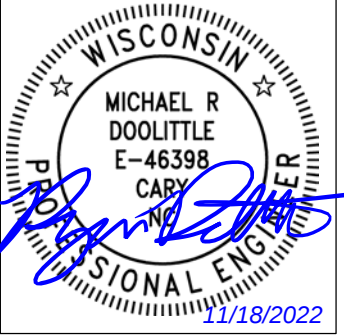
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KHA PROJECT NUMBER:

014681000.1.304

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SHEET TITLE:

TRAFFIC CONTROL
PLAN

SHEET NUMBER:

TC.03

TCP DESIGNED PER WISDOT FIELD MANUAL LAYOUT 6



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PROJECT INFORMATION:

GREENFIELD
POLICE DEPARTMENT
LICENCE PLATE READER
TRAFFIC CONTROL PLANS

PLANS PREPARED BY:

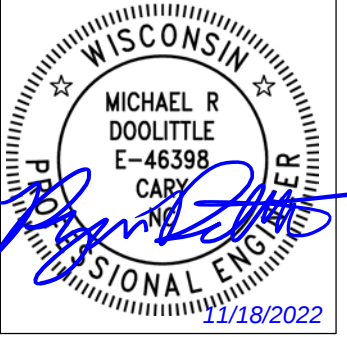
Kimley»Horn

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KHA PROJECT NUMBER:

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SHEET TITLE:

TRAFFIC CONTROL
PLAN

SHEET NUMBER:

TC.04

TCP DESIGNED PER WISDOT FIELD MANUAL LAYOUT 6



CAMERA SITE #15

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PROJECT INFORMATION:

GREENFIELD
POLICE DEPARTMENT
LICENCE PLATE READER
TRAFFIC CONTROL PLANS

PLANS PREPARED BY:

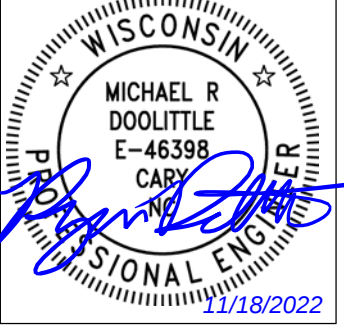
Kimley»Horn

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KHA PROJECT NUMBER:

014681000.1.304

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WRB

SHEET TITLE:

TRAFFIC CONTROL
PLAN

SHEET NUMBER:

TC.05

Attachment 1 - Environmental Checklist

Note: To print the Checklist, click on the icon and set Pages to Print to "© Pages 3-5"



Include this Checklist and any supplemental documentation with form dt1553, *Application/Permit to Construct, Operate and Maintain Utility Facilities on Highway Right-of-Way*. The application will be returned if the Checklist is not included or is incomplete.

Answer the following questions related to the proposed utility project to show environmental compliance or coordination with various agencies/Tribes. WisDOT's permit approval does not relieve a utility from compliance with all applicable federal, state, local and tribal laws, codes, regulations, and ordinances and shall not be construed as superseding any other governmental agency's more restrictive requirements. Keep all supporting documents on file with WisDOT's permit for its duration and provide upon request.

Remember: Supporting documentation may be required to prove environmental coordination with a regulatory agency on the Checklist. If an agency does not require documentation, a utility is not required to submit it to WisDOT. However, supply documentation if it may be helpful in WisDOT's review of the Checklist, e.g., permits, approvals, certifications, checklists, correspondence, website screenshots/PDFs, mapping, etc. Checkboxes that only have yes, no, or not applicable answers are automatically set to no or not applicable.

1. ***Aquatic Resource Impacts***

Use the Wisconsin Wetland Inventory maps and the [DNR Surface Water Data Viewer](#) (SWDV) to identify waterways, surface waters and potential wetlands. These tools are not comprehensive, and field surveys may be required to identify aquatic resources within the footprint of a proposed project. Consult with Department of Natural Resources and U.S. Army Corps of Engineers as needed.

Does the proposed project have the potential to impact any aquatic resources (wetlands, waterways, etc.)?

- ☐ No – Skip to question 2 ☐ Yes – Continue below

State Wetland/Waterway Permit

Does the proposed project meet all necessary terms, conditions, and eligibility criteria to receive non-reporting coverage under the DNR utility general permit ([DNR-GP3-2018](#)) for wetland/waterway impacts?

- ☐ Yes – Project meets all requirements for DNR *non-reporting* utility general permit coverage
- ☐ No – Project received *reporting* utility general permit coverage or individual wetland/waterway permit <https://dnr.wisconsin.gov/topic/Sectors/UtilityPermitting.html>

- ☐ Not applicable – Project is exempt from all wetland/waterway permitting requirements

Wetlands: <https://dnr.wisconsin.gov/topic/Waterways/Permits/Exemptions.html>

Waterways: <https://dnr.wisconsin.gov/topic/Wetlands/permits/exemptions.html>

- ☐ Not applicable – Project occurs wholly within boundaries of a Native American Nation or Tribal reservation and DNR does not have jurisdiction. See question 6.

Federal Wetland/Waterway Permit

Does the proposed project meet all necessary terms, conditions, and eligibility criteria to receive no-preconstruction notification (PCN) coverage under the USACE utility or other regional general permit (RGP) or a nationwide permit (NWP) for wetland/waterway impacts?

<https://www.mvp.usace.army.mil/Missions/Regulatory/Permitting-Process-Procedures/>

- ☐ Yes – Project meets all requirements for no-PCN coverage under a USACE RGP or NWP
- ☐ No – Project covered under USACE's RGP or NWP coverage obtained through submittal of a preconstruction notification or other Section 404 permit coverage.
- ☐ Not applicable – Project does not impact waters of the United States.

2. Protected Species

Projects with the potential to affect protected species must be covered under the [DNR Broad Incidental Take Permit/Authorization for No/Low Impact Activities](#) or undergo an endangered resources preliminary assessment or review. A preliminary assessment may be completed through the [DNR Natural Heritage Inventory \(NHI Public Portal\)](#). An endangered resources review may be conducted by a [DNR certified endangered resources reviewer](#).

All components of the proposed project covered under this permit:

- ☐ Are covered by the DNR Broad Incidental Take Permit/Authorization for No/Low Impact Activities.
- ☐ Received one of the following results from the NHI Public Portal preliminary assessment or endangered species review. WisDOT encourages implementing DNR recommended actions.
 - ☐ No further actions are needed
 - ☐ Further actions are recommended
 - ☐ Further actions are strongly recommended
- ☐ Are implementing all required actions from the DNR endangered resources review. WisDOT also encourages implementation of DNR recommended actions.
- ☐ Are covered by an DNR Incidental Take Permit and/or USFWS coordination under the Endangered Species Act.

3. Construction Site Stormwater Permits

Projects that involve one acre or more of land disturbance require a utility to submit a Notice of Intent (NOI) erosion control permit under Wis. Adm. Code [NR 216](#).

Does the proposed project affect one acre or more of land disturbance?

- ☐ No – Meets criterion ☐ Yes – Coordination completed

4. Erosion Control Plan & Stormwater Management Plans

Does the proposed project meet the [Trans 401](#) “Major” category?

- ☐ No – Meets criterion for minor project ☐ Yes – Attach formal erosion control plan

For minor projects, immediately replace disturbed soil and topsoil and/or temporary seed and mulch the soil, which includes repairing equipment and vehicle tracks. Have erosion control devices (hay or straw bales, wattles, silt fence, erosion mat, etc.) at the site or immediately accessible in case weather conditions cause immediate action to protect bare or loose soil. Cover soil piles left overnight with plastic or protect with silt fence or other approved perimeter control devices on the downslope side to prevent possible runoff.

Does the proposed project require a Stormwater Management Plan?

- ☐ No – Meets criterion ☐ Yes – Coordination completed

For more information: [DNR Erosion Control and Stormwater Management Plans](#)

5. Wisconsin Historic Preservation Database

Are any historic resources located within the proposed project limits?

- ☐ No – Meets criterion ☐ Yes – Coordination completed

Contact: [State Historic Preservation Office](#) or go to: [Wisconsin Historic Preservation Database](#)

6. Tribal Government Coordination

Is any part of the work located within the reservation boundaries of a Native American Nation or Tribal reservation? Any utilities placed within a Native American Nation or Tribal reservation require Bureau of Indian Affairs (BIA)/Tribal approval prior to placing their facilities in WisDOT ROW.

- ☐ No – Meets criterion ☐ Yes – Coordination completed

Tribal Government Contacts: <http://witribes.wi.gov/>

Note: A utility must obtain a Tribal permit and BIA approval of a NEPA document to proceed with utility work on a STH within a Tribal Reservation. WisDOT's utility permit does not grant automatic approval.

7. Open or Closed Contaminated Sites, DNR Water Supply Permit, Underground Storage Tanks (USTs), Leaking Underground Storage Tanks (LUSTs)

Does the proposed project affect any of these items?

Decision \ Item	Contaminated sites	DNR water supply permit	USTs	LUSTs
No – Meets criterion	☒	☒	☒	☒
Yes – Coordination completed	☐	☐	☐	☐

DNR: [Wisconsin Remediation and Redevelopment Database \(WRRD\)](#) and [Remediation & Redevelopment \(RR\) Program staff contacts](#)

DATCP: [MyDATCP: Storage Tank Search](#)
[Region Environmental Coordinators and Regionwide SWECE and Mega/Major project coordinators](#)

8. Asbestos

Does the project include replacement of asbestos wrapped utility conduit or Transite piping?

☒ No – Meets criterion ☐ Yes – Document who will complete required notification to the [DNR](#) or [DHS](#), the abatement methods, and the disposal location.

9. Project Comments

Provide any additional comments or extenuating circumstances that may assist in the review of the project's environmental coordination. List all utility work request, project plan set, or other identification numbers or references included in the environmental coordination and permitting of the project.

Certification Statement: Upon executing the signature below, the signatory certifies that the Checklist is complete, all information is accurate and true, and all required environmental compliance/coordination is complete and on file with the utility.

Disclaimer: Any change in project scope requires this Checklist to be resubmitted and certified to reflect the most updated set of project details.

Signature:  Date: 11/09/2022

Name & Title (print): Heather Thayer, Project Manager

Company: Kimley-Horn & Associates

Email: heather.thayer@kimley-horn.com

K:\RAL_Wireless\Flock Safety\KHS-919 (WI) (Aluminum Direct Embed)\CAD\2023.04.27_POLE DETAIL_Aluminum Direct-Embed (RC I)_Provelli_(WI)_RD.dwg ----- 04/28/23 3:05 PM by: greg.vanmaaren



STATE OF WISCONSIN

STANDARD CONFIGURATION DETAILS
AUTOTMATIC LICENSE PLATE READER
AND SOLAR PANEL SYSTEM
(DIRECT EMBED SYSTEM WITH PROVELI SPLICE)

INDEX OF SHEETS		
SHEET	DESCRIPTION	REV
T-1	TITLE SHEET	0
S-1	GENERAL NOTES & POLE ASSEMBLY DETAIL	0
S-2	EQUIPMENT DETAILS	0
S-3	FOUNDATION DETAILS	0
S-4	EQUIPMENT DETAILS	0
R-1	FROST DEPTH INFORMATION	0

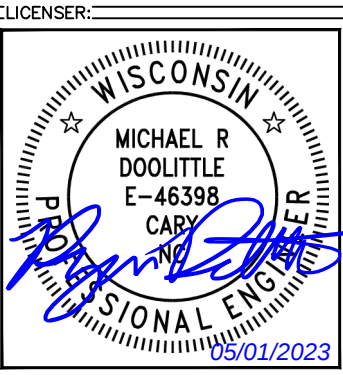
NOTE: STRUCTURE MUST BE
LOCATED A MINIMUM OF
12-FT FROM THE TRAVELWAY.



PROJECT INFORMATION:
STANDARD
CONFIGURATION DETAILS
(DIRECT EMBED SYSTEM)
AUTOMATIC LICENSE
PLATE READER AND
SOLAR PANEL SYSTEM

PLANS PREPARED BY:
Kimley»Horn
817 WEST PEACHTREE STREET,
NW, SUITE 601,
ATLANTA, GA 30308
PHONE: (404) 419-8700
WWW.KIMLEY-HORN.COM

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KHA PROJECT NUMBER:
014681002
DRAWN BY: MRD CHECKED BY: MRD

SHEET TITLE:
TITLE SHEET
SHEET NUMBER:
T-1

K:\RAL_Wireless\Flock Safety\KHF5-919 (WI) (Aluminum Direct Embed)\CAD\2023\04\27_POLE DETAIL Aluminum Direct-Embed (RC I) Provelli (WI) RD.dwg 04/28/23 3:05 PM by: greg.vanmaaren

DESIGN NOTES

1. POLE AND FOUNDATIONS ARE DESIGNED IN ACCORDANCE WITH THE FOLLOWING CODES:

1.1. 2015 INTERNATIONAL BUILDING CODE

1.2. AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORT FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 2015 EDITION.
2. POLE ANALYSIS AND FOUNDATION DESIGN ARE BASED ON THE FOLLOWING CRITERIA:

2.1. DESIGN WIND SPEED (V_{ult}): 105 MPH (MAXIMUM)

2.2. RISK CATEGORY: LOW / ADT > 10,000 (300-YEAR MRI)

2.3. EXPOSURE CATEGORY: C

2.4. TOPOGRAPHIC CATEGORY: 1

2.5. SEISMIC DESIGN CRITERIA:

2.5.1. SOIL SITE CLASS: D (ASSUMED)

2.5.2. SPECTRAL RESPONSE, S_s: 0.100g (MAXIMUM)

2.5.3. SPECTRAL RESPONSE, S₁: 0.050g (MAXIMUM)

2.5.4. SEISMIC DESIGN CATEGORY: D

2.6. FACTORED STRUCTURE BASE REACTIONS ARE CALCULATED AS FOLLOWS:

ULTIMATE BASE MOMENT: 2,320 LB-FT

ULTIMATE BASE SHEAR: 240 LB

ULTIMATE BASE AXIAL: 110 LB

2.7. SHOULD ANY OF THE SITE-SPECIFIC PARAMETERS BE HIGHER THAN WHAT IS NOTED ABOVE, THE EOR SHALL BE CONTACTED TO PROVIDE A REVISED DESIGN.
3. THE TOP OF THE FOUNDATION OUTSIDE OF THE PIPE FOOTPRINT SHALL BE SLOPED BETWEEN 1° AND 3° TO ALLOW FOR ADEQUATE DRAINAGE.
4. THE PROPOSED DETAILS OF THIS DRAWING SHALL NOT BE USED WHERE SOILS CONSIST OF SOFT CLAY, PEAT, OR SOIL WHERE A SMALL DIAMETER REBAR (#5 OR SMALLER) OR METAL PROBE PENETRATES EASILY INTO THE SOIL BY MORE THAN 6" WHEN THE FULL WEIGHT OF A PERSON IS APPLIED. IF UNEXPECTED SOIL IS FOUND ON SITE, THE CONTRACTOR SHALL CONTACT THE EOR FOR DIRECTION.

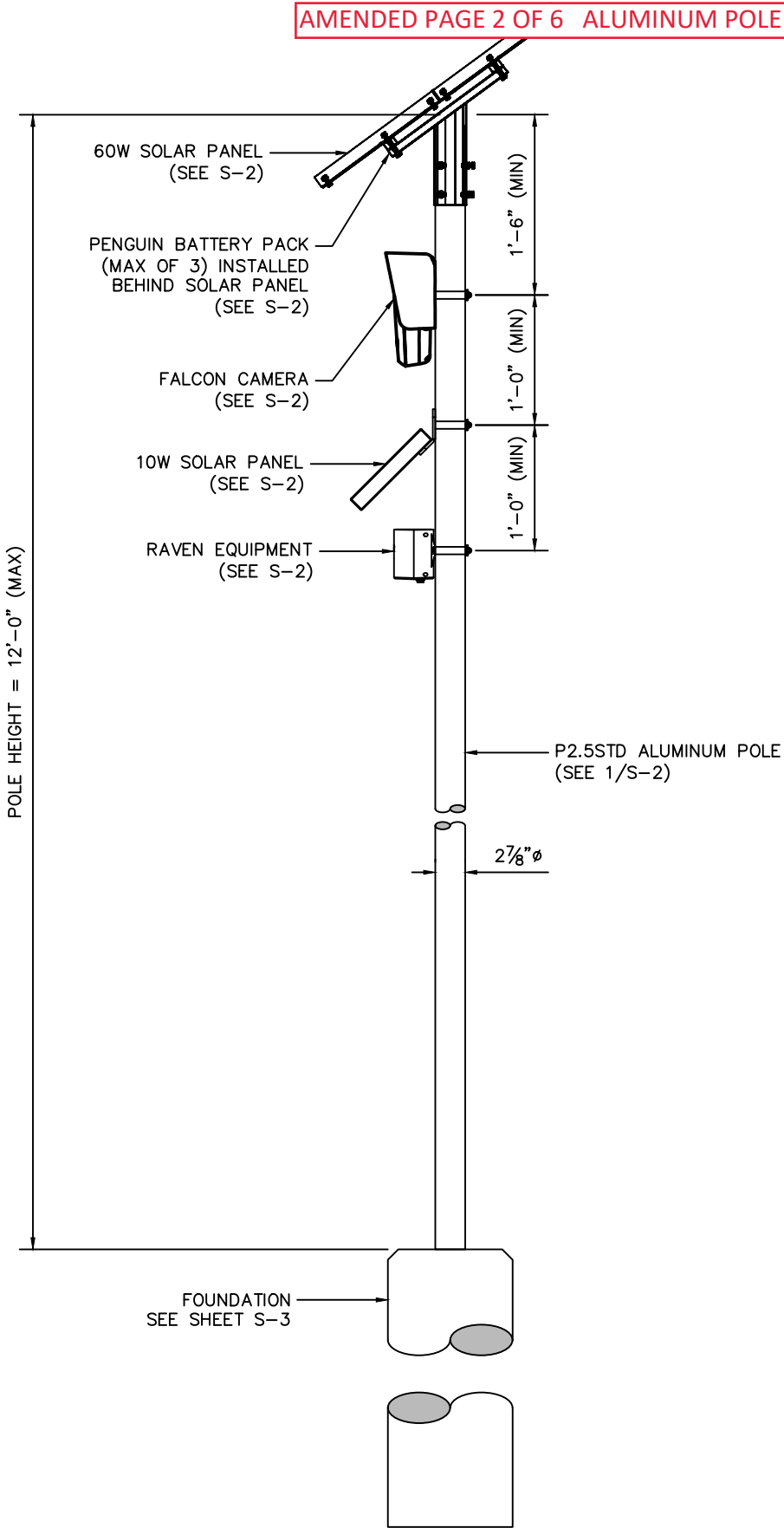
GENERAL & CONSTRUCTION NOTES

1. CONTRACTOR SHALL CONTACT DESIGNATED AGENCY TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL APPLY AND OBTAIN AN APPROVED TRAFFIC CONTROL PLAN IN ACCORDANCE WITH MUTCD AND LOCAL JURISDICTION STANDARDS.
3. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO ORIGINAL SITE CONDITION TO THE SATISFACTION OF STATE DEPARTMENT OF TRANSPORTATION AND LOCAL JURISDICTION.
4. ALL WORK SHALL CONFORM TO APPLICABLE ELECTRICAL CODES EXCEPT WHEN STATE DEPARTMENT OF TRANSPORTATION OR LOCAL JURISDICTION STANDARDS SUPERSEDE.
5. POLE AND PROPOSED EQUIPMENT SHALL BE CONNECTED TO SOLID BARE BOND GROUND AND GROUNDING ROD IN POLE FOUNDATION.
6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH SPECIFICATIONS DEFINED BY THE STATE DEPARTMENT OF TRANSPORTATION OR LOCAL JURISDICTION, UNLESS SPECIFICALLY STATED OR SHOWN OTHERWISE HEREIN.

ADA COMPLIANCE NOTES

1. ALL SIDEWALK CONSTRUCTION SHALL BE IN ACCORDANCE WITH ADA TITLE II, STATE DEPARTMENT OF TRANSPORTATION, AND LOCAL JURISDICTION STANDARDS.
2. STATE DEPARTMENT OF TRANSPORTATION CURRENT EDITION STANDARDS SHALL BE USED FOR PEDESTRIAN CONTROL PLANS WHEN CLOSURE OF SIDEWALK IS REQUIRED FOR CONSTRUCTION.
3. MINIMUM CLEAR PEDESTRIAN ACCESS ROUTE (PAR) SHALL BE 48" WIDE.
4. NO OBSTRUCTION IS PERMITTED ALONG THE WIDTH OF THE SIDEWALK, UP TO AN ELEVATION OF 7'-0" ABOVE GRADE.

NOTE: STRUCTURE MUST BE LOCATED A MINIMUM OF 12-FT FROM THE TRAVELWAY.



1 POLE ELEVATION DETAIL
S-1 SCALE: N/A

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PROJECT INFORMATION:

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CONFIGURATION DETAILS
(DIRECT EMBED SYSTEM)
AUTOMATIC LICENSE
PLATE READER AND
SOLAR PANEL SYSTEM

PLANS PREPARED BY:

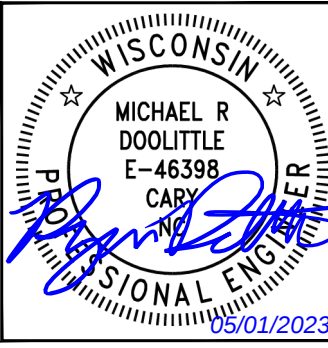
Kimley»Horn

817 WEST PEACHTREE STREET,
NW, SUITE 601,
ATLANTA, GA 30308
PHONE: (404) 419-8700
WWW.KIMLEY-HORN.COM

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LICENSER:



KHA PROJECT NUMBER:

014681002

DRAWN BY: CHECKED BY:

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MRD

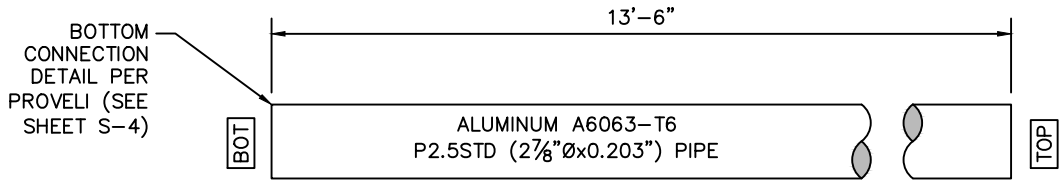
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GENERAL NOTES
AND POLE
ASSEMBLY DETAIL

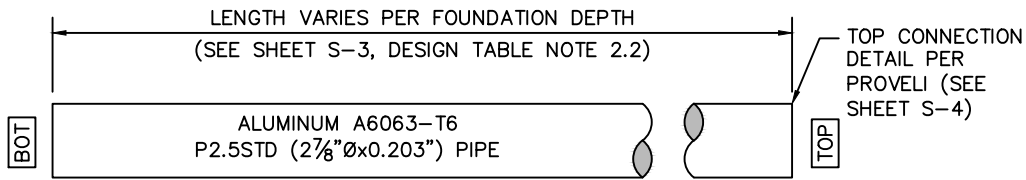
SHEET NUMBER:

S-1

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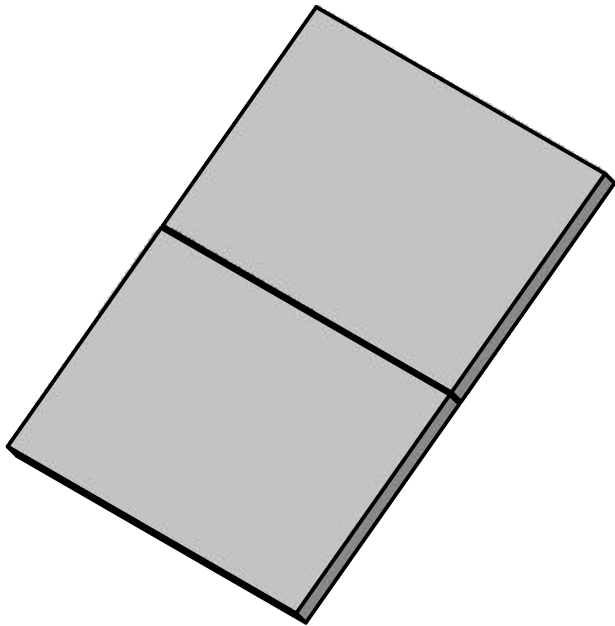


PIPE DETAIL (TOP)

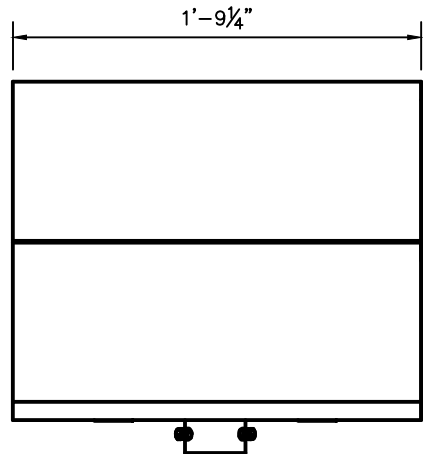


EMBED PIPE DETAIL (BOTTOM)

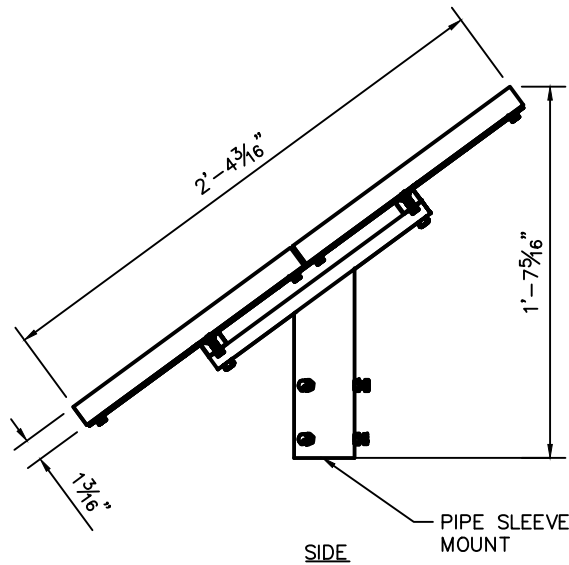
60 WATT SOLAR PANEL WEIGHT = 30 LB. (APPROX.)



ISOMETRIC



FRONT



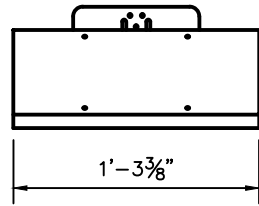
SIDE

MOUNTING HARDWARE TO BE PROVIDED BY FLOCK SAFETY

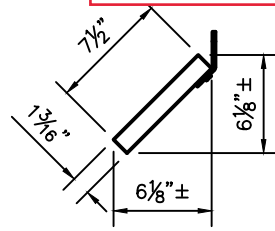
60 WATT SOLAR PANEL DETAIL (TOP MOUNTED)

10 WATT SOLAR PANEL WEIGHT = 3 LB. (APPROX.)

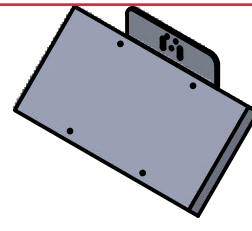
AMENDED PAGE 3 OF 6 ALUMINUM POLE DETAILS



FRONT



SIDE

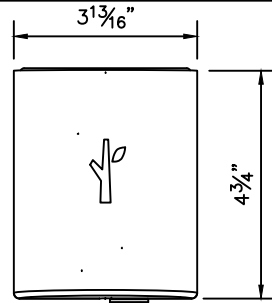


ISOMETRIC

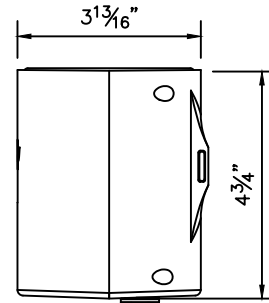
MOUNTING HARDWARE TO BE PROVIDED BY FLOCK SAFETY

10 WATT SOLAR PANEL DETAIL

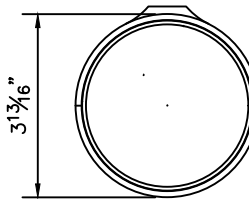
"RAVEN" EQUIPMENT WEIGHT = 2 LB. (APPROX.)



FRONT



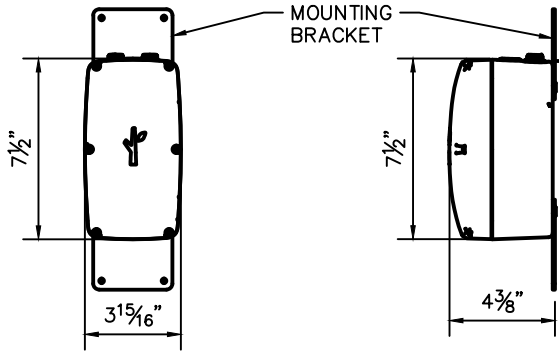
SIDE



TOP

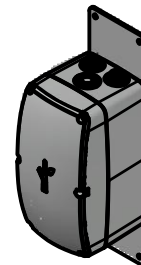
MOUNTING HARDWARE TO BE PROVIDED BY FLOCK SAFETY

"RAVEN" EQUIPMENT



FRONT

SIDE

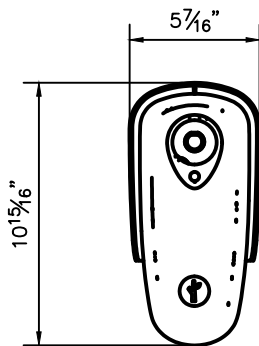


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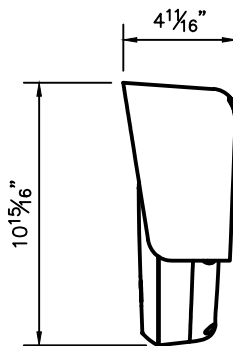
BATTERY PACKS TO BE MOUNTED BEHIND 60W SOLAR PANEL

"PENGUIN" BATTERY PACK
WEIGHT = 5 LB. (APPROX.)

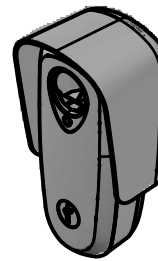
"PENGUIN" BATTERY PACK



FRONT



SIDE



ISOMETRIC

MOUNTING HARDWARE TO BE PROVIDED BY FLOCK SAFETY

FLOCK SAFETY "FALCON" CAMERA

"FALCON" CAMERA
WEIGHT = 5 LB. (APPROX.)

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PROJECT INFORMATION:

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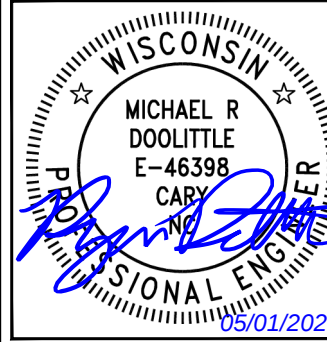
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817 WEST PEACHTREE STREET,
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ATLANTA, GA 30308
PHONE: (404) 419-8700
WWW.KIMLEY-HORN.COM

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SHEET TITLE:

EQUIPMENT
DETAILS

SHEET NUMBER:

S-2

K:\RAL_Wireless\Flock Safety\KHFS-919 (WI) (Aluminum Direct Embed)\CAD\2023\04\27_POLE DETAIL Aluminum Direct-Embed (RC I) Provelli (WI)_R0.dwg 04/28/23 3:05 PM by: greg.vanmaaren

FOUNDATION DESIGN NOTES

1. FOUNDATION DESIGN REACTIONS ARE BASED ON INTERNAL CALCULATIONS BY KIMLEY–HORN. ANALYSIS CRITERIA CAN BE FOUND ON SHEET S–1.
2. FOUNDATION MAY BE CAST–IN–PLACE, OR PRECAST.
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI

3.A. MIX DESIGN TO BE IN ACCORDANCE WITH ACI 318, CHAPTER 26

3.B. COARSE AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33 SIZE #57

3.C. COLD WEATHER PLACEMENT SHALL COMPLY WITH ACI 306.1

3.D. HOT WEATHER PLACEMENT SHALL COMPLY WITH ACI 305 R
4. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 1"
5. CONTRACTOR SHALL VERIFY THAT THE PROPOSED FOUNDATION CAN BE BUILT AS SHOWN. CONTRACTOR SHALL OBTAIN EOR APPROVAL FOR ANY CHANGES TO THE PROPOSED DESIGN.
6. CONTRACTOR SHALL FIELD VERIFY THE PRESENCE OF GROUNDWATER IN THE TOP 10–FT OF SOIL PRIOR TO CONSTRUCTION. IF GROUNDWATER IS ENCOUNTERED, ONE OF THE FOLLOWING METHODS SHALL BE IMPLEMENTED:

6.A. THE CONTRACTOR SHALL PUMP EXCESS WATER OUT OF A BORE HOLE THROUGHOUT INSTALLATION PROCESS.

6.B. THE FOUNDATION MAY BE INSTALLED INSIDE INSIDE OF A SONOTUBE THAT EXTENDS TO THE FULL EMBEDMENT DEPTH. SOIL BACKFILL SHALL BE PROPERLY COMPACTED TO A MINIMUM OF 95% OF STANDARD MAXIMUM DENSITY (ASTM D 698, 100 PCF MINIMUM).

6.C. A PL $\frac{1}{4}$ " TEMPORARY CASING MAY BE USED DURING INSTALLATION. THE CASING SHALL BE EXTRACTED AS THE CONCRETE IS PLACED SUCH THAT A HEAD OF CONCRETE IS MAINTAINED ABOVE THE BOTTOM OF THE CASING TO PREVENT WATER INTRUSION INTO THE CONCRETE MIX.

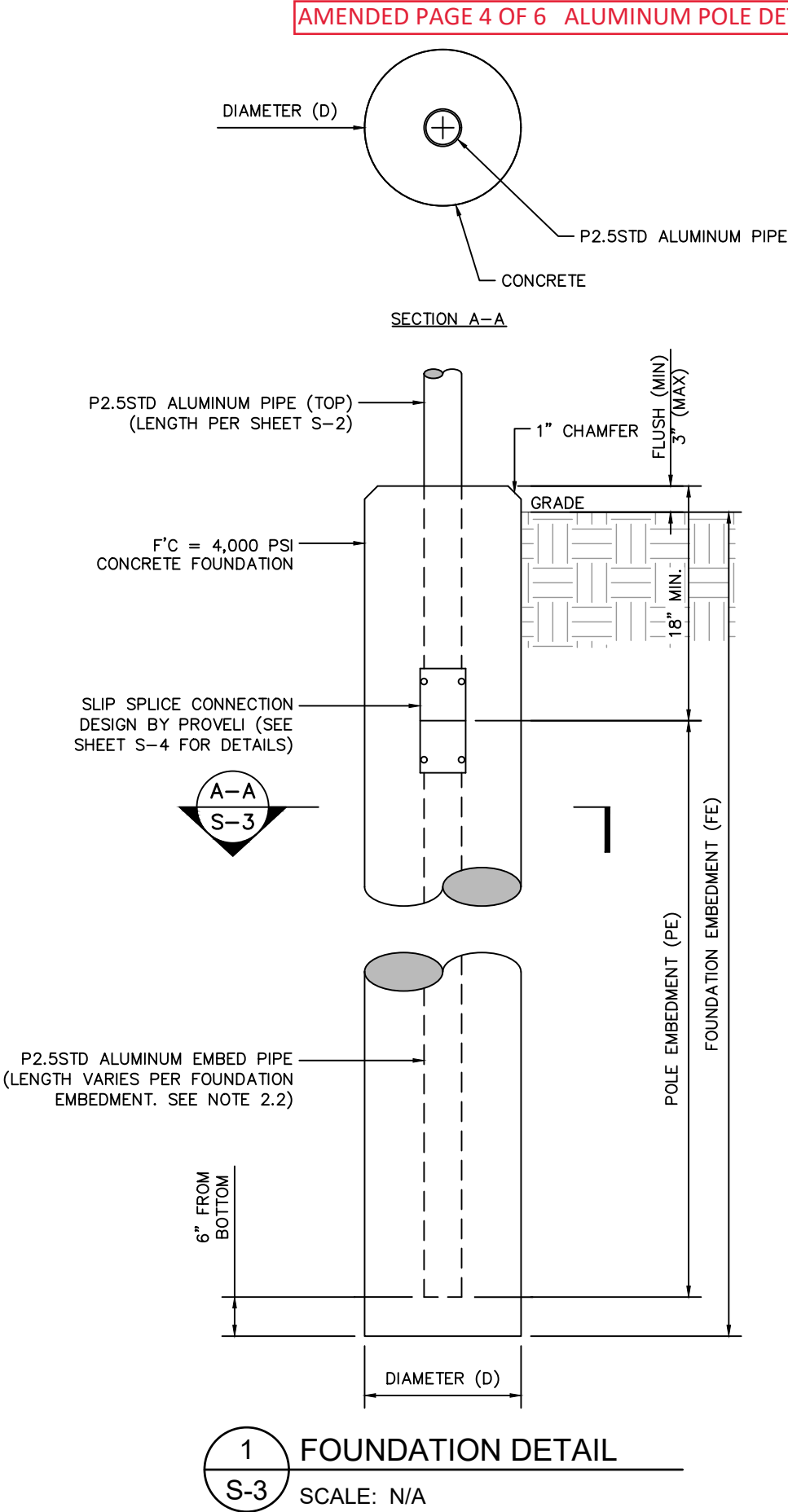
FOUNDATION DESIGN TABLE		
DIAMETER (D)	FOUNDATION EMBEDMENT (FE)	POLE EMBEDMENT (PE)
12"Ø	5'–0" (SEE NOTE 2)	3'–0" (SEE NOTE 2.1)

DESIGN TABLE NOTES:

1. DRAWINGS DENOTE A GENERIC FOUNDATION CONFIGURATION AND ARE NOT TO SCALE. REFER TO TABLE ABOVE FOR OVERALL DIMENSIONS.
2. FOUNDATION EMBEDMENT (FE) SHALL BE THE MAXIMUM OF THE DIMENSIONS SPECIFIED, OR 6" BELOW THE FROST DEPTH APPLICABLE TO THE SITE–SPECIFIC LOCATION. CONTRACTOR SHALL VERIFY FROST DEPTH PRIOR TO CONSTRUCTION. SEE SHEET R–1 FOR ADDITIONAL INFORMATION.

2.1. POLE EMBEDMENT (PE) SHALL TERMINATE 6" LESS THAN THE FOUNDATION EMBEDMENT (FE) FOR ALL FINAL CONFIGURATIONS.

2.2. FINAL EMBED PIPE LENGTH SHALL BE THE SPECIFIED FOUNDATION EMBEDMENT (FE) REQUIRED TO MEET FROST DEPTH REQUIREMENTS MINUS 2–FT. FINAL EMBED PIPE SIZES MAY VARY ACCORDINGLY, FIELD CUT TO LENGTH AS REQUIRED.
- 2.3. PIPES SHALL BE JOINED TOGETHER IN ACCORDANCE WITH REFERENCED PROVELI SLIP SPLICED CONNECTION DETAIL. CONTACT PROVELI FOR DESIGN STRENGTH CALCULATIONS.



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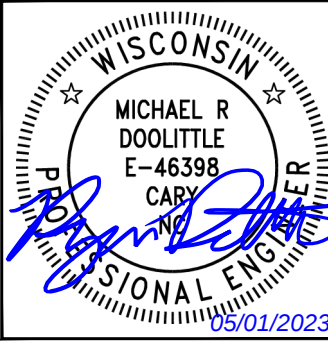
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MRD

MRD

SHEET TITLE:

FOUNDATION
DETAILS

SHEET NUMBER:

S-3

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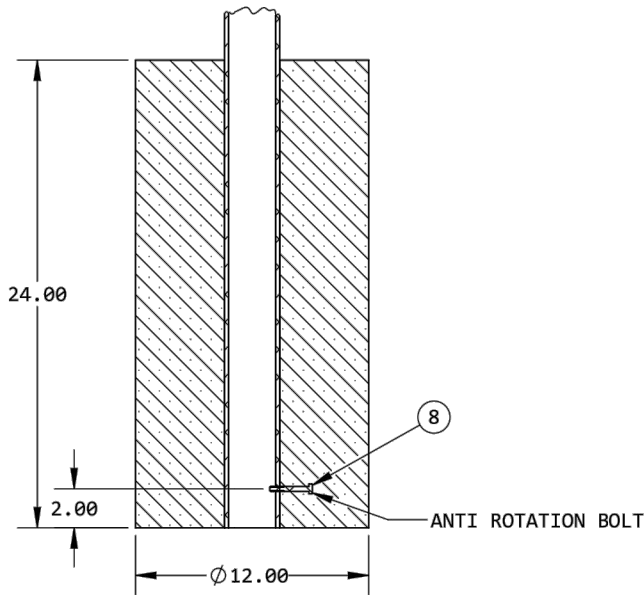
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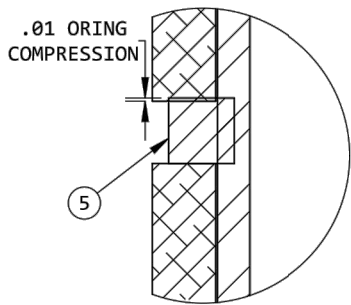
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MRD MRD

SHEET TITLE: _____
**EQUIPMENT
DETAILS**
SHEET NUMBER: _____
S-4

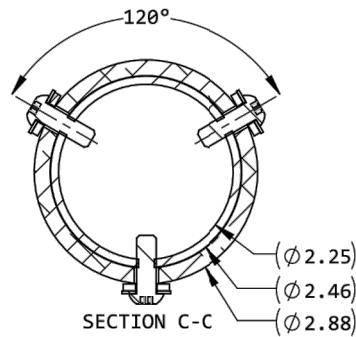
#	DESCRIPTION	QTY.
1	2.5" SCH 40 2.8750D 74.000L	1
2	2.5" SCH 40 2.8750D 94.000L	1
3	BUT TORX 0.250-20 TAMPER-RESISTANT	6
4	INSERT SLEEVE STYLE 7 TAPPED	1
5	ORING	1
6	WASHER	6
7	CONCRETE FOOTING	1
8	HBOLT 0.2500-20	1



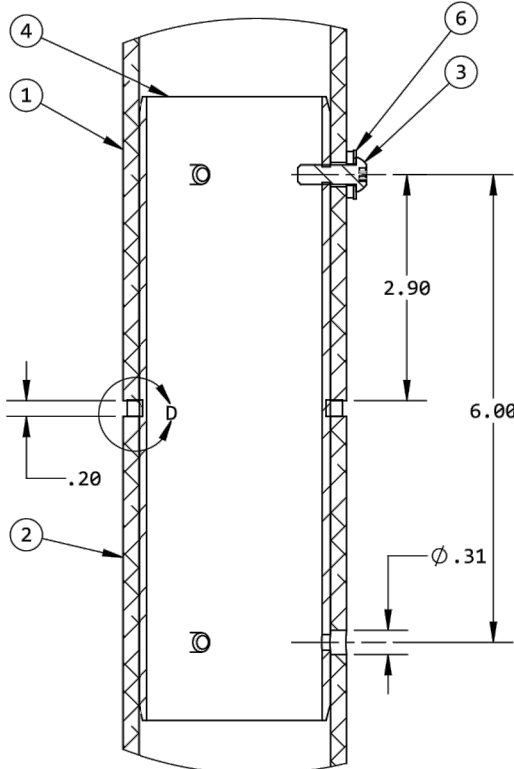
DETAIL E
SCALE 1 : 8



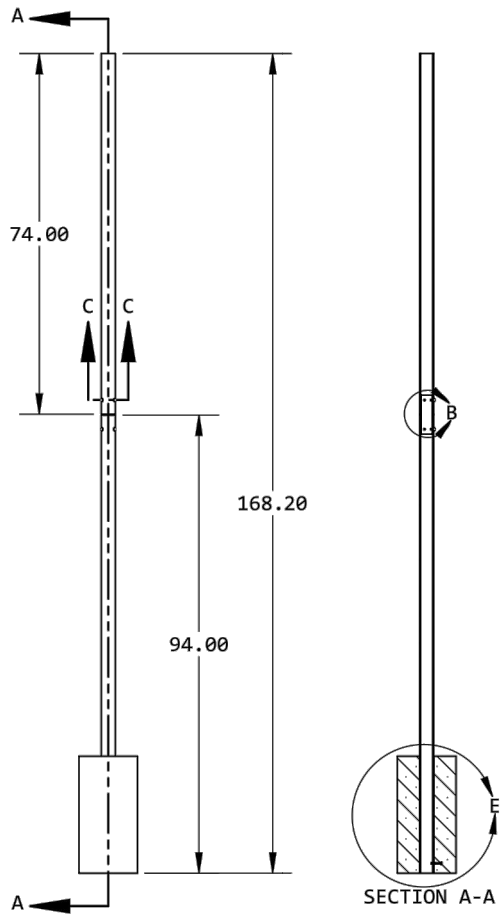
DETAIL D
SCALE 2 : 1



SECTION C-C
SCALE 1 : 2



DETAIL B
SCALE 1 : 2



SECTION A-A

BY	CSC
DATE	9/3/2019
REV	B
DESCRIPTION:	STYLE 7 COUPLER ASSEMBLY
PART #:	1020-01
DIM ARE IN INCHES	MATERIAL:
TOLERANCES: (REF)	VARIES
FRACTION: 1/16	WEIGHT:
ANGLE ±1.0°	168.42 LBS
X.XX ±0.03	DO NOT SCALE DRAWING
X.XXX ±0.015	
X.XXXX ±0.0050	
SIZE: DWG #:	
B PIPE COUPLER ASM	
SCALE 1:32	SHEET 2 OF 1

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FROST DEPTH NOTES

1. ESTIMATED FROST DEPTHS FOR VARIOUS COUNTIES ARE LISTED IN THE PROVIDED TABLES.
2. CONTRACTOR IS RESPONSIBLE FOR VERIFYING FROST DEPTHS WITH THE LOCAL JURISDICTION REQUIREMENTS.



State	County	Design Frost Depth (in.)
WI	ADAMS	70
WI	ASHLAND	80
WI	BARRON	80
WI	BAYFIELD	80
WI	BROWN	60
WI	BUFFALO	80
WI	BURNETT	80
WI	CALUMET	60
WI	CHIPPEWA	80
WI	CLARK	70
WI	COLUMBIA	60
WI	CRAWFORD	70
WI	DANE	60
WI	DODGE	60
WI	DOOR	60
WI	DOUGLAS	80
WI	DUNN	80
WI	EAU CLAIRE	80
WI	FLORENCE	70
WI	FOND DU LAC	60
WI	FOREST	70
WI	GRANT	60
WI	GREEN	60
WI	GREEN LAKE	70
WI	IOWA	60
WI	IRON	80
WI	JACKSON	80
WI	JEFFERSON	60
WI	JUNEAU	70
WI	KENOSHA	60
WI	KEWAUNEE	60
WI	LA CROSSE	70
WI	LAFAYETTE	60
WI	LANGLADE	70
WI	LINCOLN	80
WI	MANITOWOC	60
WI	MARATHON	80
WI	MARINETTE	60
WI	MARQUETTE	70
WI	MENOMINEE	70
WI	MILWAUKEE	60
WI	MONROE	70
WI	OCONTO	60
WI	ONEIDA	80
WI	OUTAGAMIE	70
WI	OZAUKEE	60

AMENDED PAGE 6 OF 6 ALUMINUM POLE DETAILS

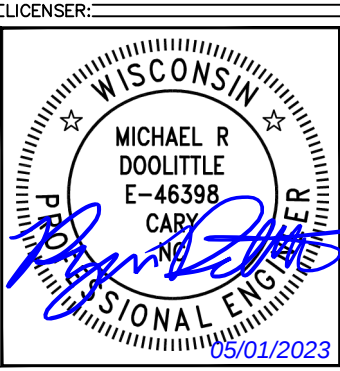
State	County	Design Frost Depth (in.)
WI	PEPIN	80
WI	PIERCE	80
WI	POLK	80
WI	PORTAGE	70
WI	PRICE	80
WI	RACINE	60
WI	RICHLAND	70
WI	ROCK	60
WI	RUSK	80
WI	SAINT CROIX	80
WI	SAUK	70
WI	SAWYER	80
WI	SHAWANO	70
WI	SHEBOYGAN	60
WI	TAYLOR	80
WI	TREMPEALEAU	80
WI	VERNON	70
WI	VILAS	80
WI	WALWORTH	60
WI	WASHBURN	80
WI	WASHINGTON	60
WI	WAUKESHA	60
WI	WAUPACA	70
WI	WAUSHARA	70
WI	WINNEBAGO	70
WI	WOOD	70



PROJECT INFORMATION: _____
STANDARD
CONFIGURATION DETAILS
(DIRECT EMBED SYSTEM)
AUTOMATIC LICENSE
PLATE READER AND
SOLAR PANEL SYSTEM

PLANS PREPARED BY: _____
Kimley»Horn
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NW, SUITE 601,
ATLANTA, GA 30308
PHONE: (404) 419-8700
WWW.KIMLEY-HORN.COM

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SHEET TITLE: _____

FROST DEPTH
REQUIREMENTS
SHEET NUMBER: _____
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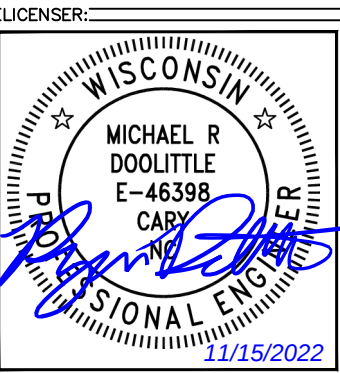
STATE OF WISCONSIN
STANDARD CONFIGURATION DETAILS
AUTOMATIC LICENSE PLATE READER
AND SOLAR PANEL SYSTEM
(X-SQRD BREAKAWAY SYSTEM)

flock safety

PROJECT INFORMATION:
STANDARD
CONFIGURATION DETAILS
(X-SQRD BREAKAWAY SYSTEM)
AUTOMATIC LICENSE
PLATE READER AND
SOLAR PANEL SYSTEM

PLANS PREPARED BY:
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014681000
DRAWN BY: GJV CHECKED BY: MRD

SHEET TITLE:
TITLE SHEET
SHEET NUMBER:
T-1

INDEX OF SHEETS		
SHEET	DESCRIPTION	REV
T-1	TITLE SHEET	0
S-1	GENERAL NOTES & POLE ASSEMBLY DETAIL	0
S-2	EQUIPMENT DETAILS	0
S-3	EQUIPMENT DETAILS	0
S-4	FOUNDATION DETAILS	0
R-1	FROST DEPTH INFORMATION	0

K:\RAL_Wireless\Flock Safety\KHA-18537 (W) (X-Squared)\CAD\FLOCK_POLE_DETAIL_XSQRD_R0.dwg 11/15/22 4:35 PM by: greg.vanmaaren

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DESIGN NOTES

1. POLE AND FOUNDATIONS ARE DESIGNED IN ACCORDANCE WITH THE FOLLOWING CODES:

1.1. 2015 INTERNATIONAL BUILDING CODE

1.2. AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORT FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 2015 EDITION.
2. POLE ANALYSIS AND FOUNDATION DESIGN ARE BASED ON THE FOLLOWING CRITERIA:

2.1. DESIGN WND SPEED (Vult): 115 MPH (MAXIMUM)

2.2. RISK CATEGORY: II

2.3. EXPOSURE CATEGORY: C

2.4. TOPOGRAPHIC CATEGORY: 1

2.5. SEISMIC DESIGN CRITERIA:

2.5.1. SOIL SITE CLASS: D (ASSUMED)

2.5.2. SPECTRAL RESPONSE, Ss: 0.300g (MAXIMUM)

2.5.3. SPECTRAL RESPONSE, S1: 0.150g (MAXIMUM)

2.5.4. SEISMIC DESIGN CATEGORY: B

2.6. STRUCTURE BASE REACTIONS ARE CALCULATED AS FOLLOWS:

ULTIMATE BASE MOMENT: 2,700 LB-FT

ULTIMATE BASE SHEAR: 300 LB

ULTIMATE BASE AXIAL: 100 LB

2.7. SHOULD ANY OF THE SITE-SPECIFIC PARAMETERS BE HIGHER THAN WHAT IS NOTED ABOVE, THE EOR SHALL BE CONTACTED TO PROVIDE A REVISED DESIGN.
3. POLE STRUCTURE SHALL BE INSTALLED ON A FOUNDATION WITH A FLAT BEARING SURFACE. THE TOP OF THE TOP OF THE FOUNDATION OUTSIDE OF THE BASE PLATE FOOTPRINT SHALL BE SLOPED BETWEEN 1° AND 3° TO ALLOW FOR ADEQUATE DRAINAGE.
4. THE PROPOSED DETAILS OF THIS DRAWING SHALL NOT BE USED WHERE SOILS CONSIST OF SOFT CLAY, PEAT, OR SOIL WHERE A SMALL DIAMETER REBAR (#5 OR SMALLER) OR METAL PROBE PENETRATES EASILY INTO THE SOIL BY MORE THAN 6" WHEN THE FULL WEIGHT OF A PERSON IS APPLIED. IF UNEXPECTED SOIL IS FOUND ON SITE, THE CONTRACTOR SHALL CONTACT THE EOR FOR DIRECTION.

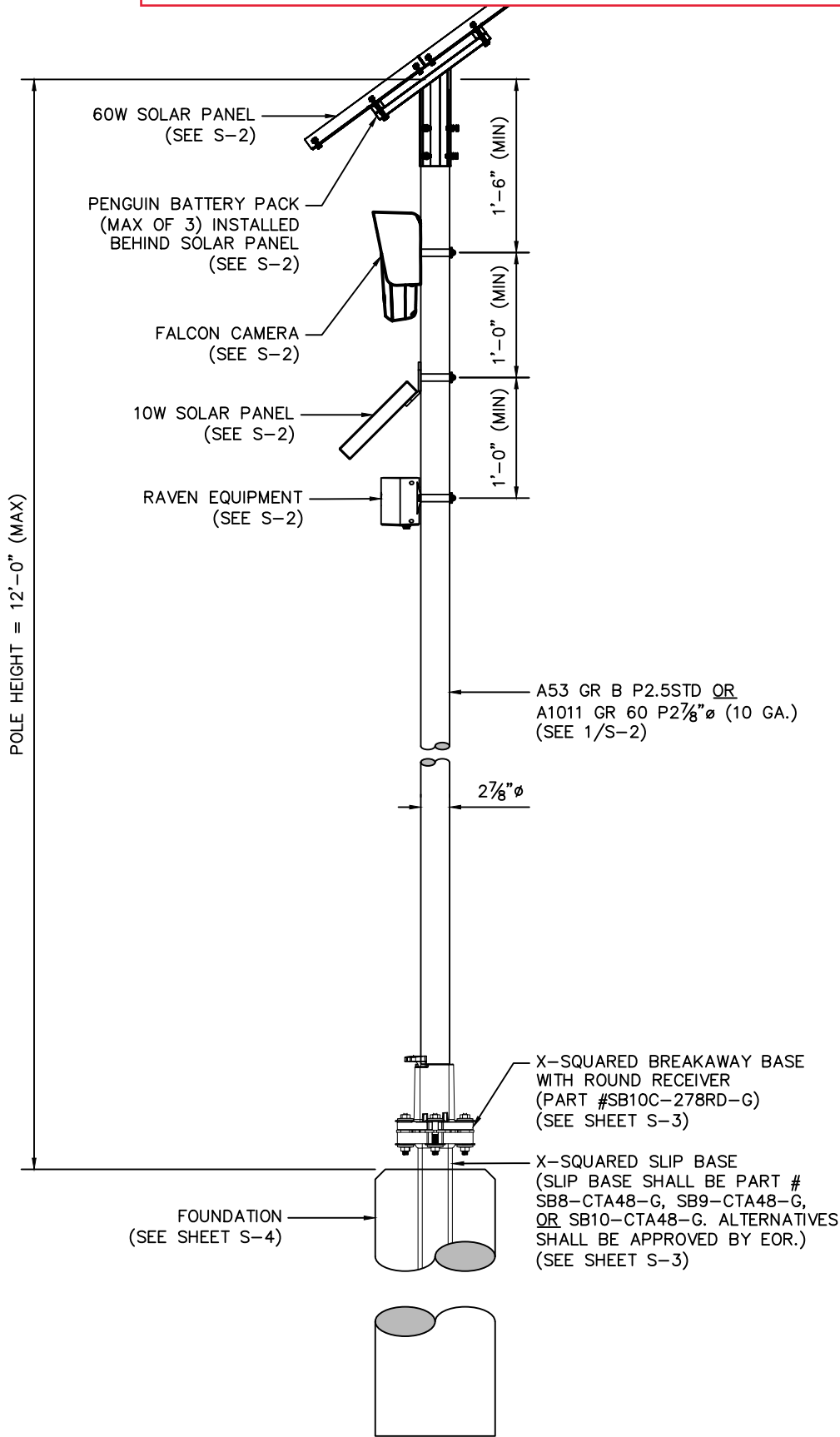
GENERAL & CONSTRUCTION NOTES

1. CONTRACTOR SHALL CONTACT DESIGNATED AGENCY TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL APPLY AND OBTAIN AN APPROVED TRAFFIC CONTROL PLAN IN ACCORDANCE WITH MUTCD AND LOCAL JURISDICTION STANDARDS.
3. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO ORIGINAL SITE CONDITION TO THE SATISFACTION OF STATE DEPARTMENT OF TRANSPORTATION AND LOCAL JURISDICTION.
4. ALL WORK SHALL CONFORM TO APPLICABLE ELECTRICAL CODES EXCEPT WHEN STATE DEPARTMENT OF TRANSPORTATION OR LOCAL JURISDICTION STANDARDS SUPERSEDE.
5. POLE AND PROPOSED EQUIPMENT SHALL BE CONNECTED TO SOLID BARE BOND GROUND AND GROUNDING ROD IN POLE FOUNDATION.
6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH SPECIFICATIONS DEFINED BY THE STATE DEPARTMENT OF TRANSPORTATION OR LOCAL JURISDICTION, UNLESS SPECIFICALLY STATED OR SHOWN OTHERWISE HEREIN.

ADA COMPLIANCE NOTES

1. ALL SIDEWALK CONSTRUCTION SHALL BE IN ACCORDANCE WITH ADA TITLE II, STATE DEPARTMENT OF TRANSPORTATION, AND LOCAL JURISDICTION STANDARDS.
2. STATE DEPARTMENT OF TRANSPORTATION CURRENT EDITION STANDARDS SHALL BE USED FOR PEDESTRIAN CONTROL PLANS WHEN CLOSURE OF SIDEWALK IS REQUIRED FOR CONSTRUCTION.
3. MINIMUM CLEAR PEDESTRIAN ACCESS ROUTE (PAR) SHALL BE 48" WIDE.
4. NO OBSTRUCTION IS PERMITTED ALONG THE WIDTH OF THE SIDEWALK, UP TO AN ELEVATION OF 7'-0" ABOVE GRADE.

AMENDED PAGE 2 OF 6 X-SQUARED BREAKAWAY POLE DETAILS



1 POLE ELEVATION DETAIL
S-1 SCALE: N/A

flock safety

PROJECT INFORMATION:

STANDARD
CONFIGURATION DETAILS
(X-SQRD BREAKAWAY SYSTEM)
AUTOMATIC LICENSE
PLATE READER AND
SOLAR PANEL SYSTEM

PLANS PREPARED BY:

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KHA PROJECT NUMBER:

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DRAWN BY: CHECKED BY:

GJV

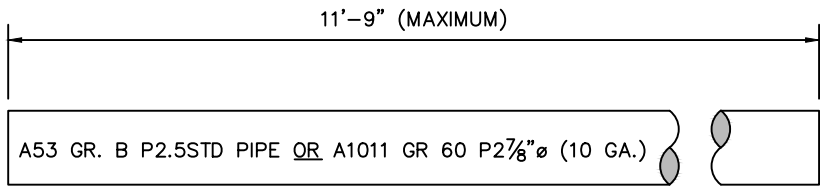
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SHEET TITLE:

GENERAL NOTES
AND POLE
ASSEMBLY DETAIL

SHEET NUMBER:

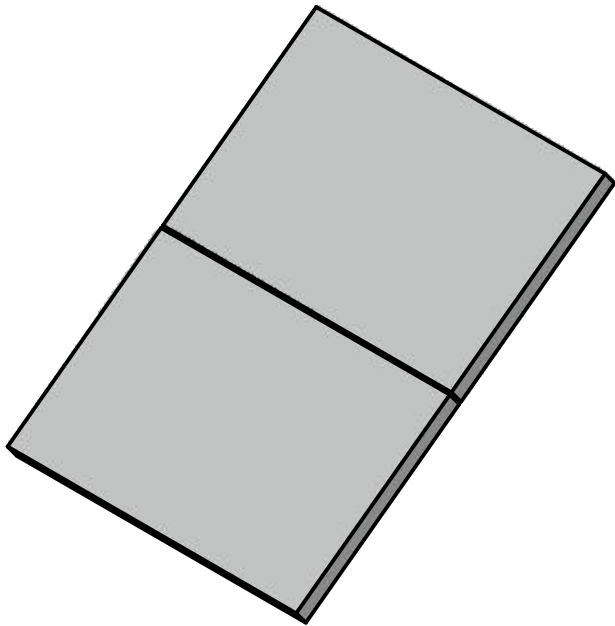
S-1



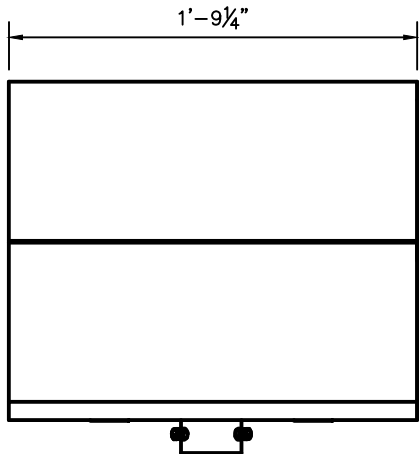
PIPE DETAIL

PIPE SHALL BE HOT DIP GALVANIZED

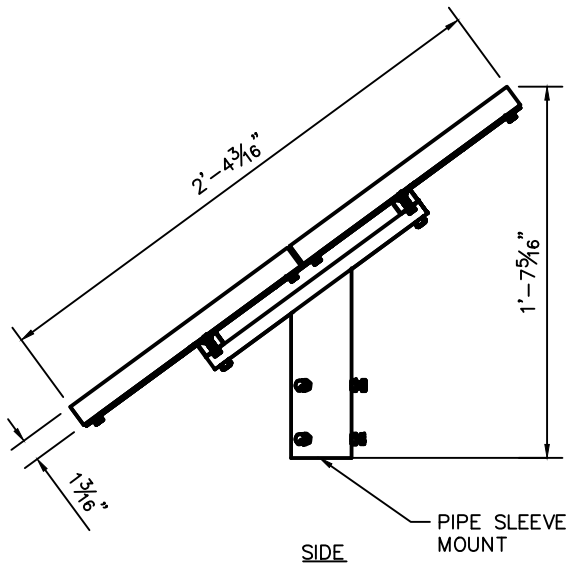
60 WATT SOLAR PANEL WEIGHT = 30 LB. (APPROX.)



ISOMETRIC



FRONT



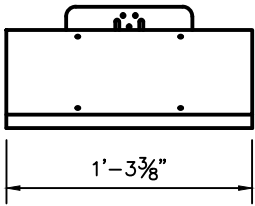
SIDE

PIPE SLEEVE MOUNT

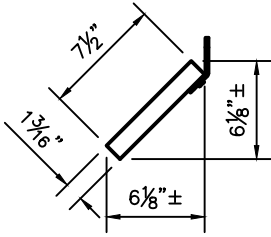
MOUNTING HARDWARE TO BE PROVIDED BY FLOCK SAFETY

60 WATT SOLAR PANEL DETAIL (TOP MOUNTED)

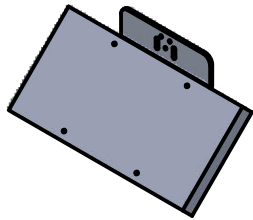
10 WATT SOLAR PANEL WEIGHT = 3 LB. (APPROX.)



FRONT



SIDE

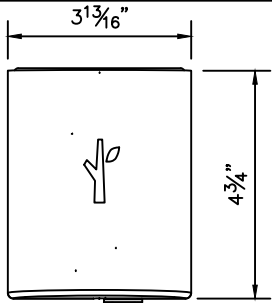


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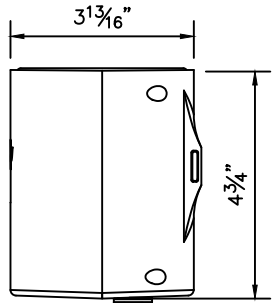
10 WATT SOLAR PANEL DETAIL

MOUNTING HARDWARE TO BE PROVIDED BY FLOCK SAFETY

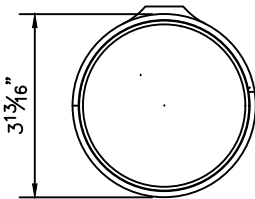
"RAVEN" EQUIPMENT WEIGHT = 2 LB. (APPROX.)



FRONT



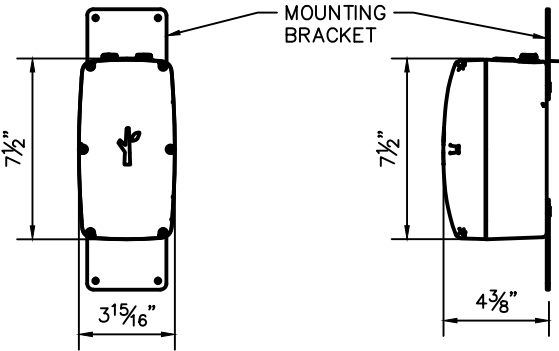
SIDE



TOP

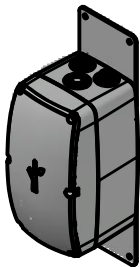
"RAVEN" EQUIPMENT

MOUNTING HARDWARE TO BE PROVIDED BY FLOCK SAFETY



FRONT

SIDE

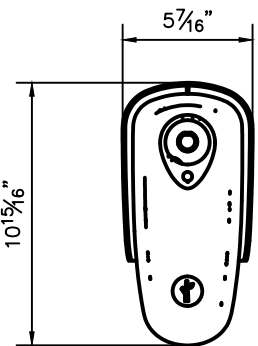


ISOMETRIC

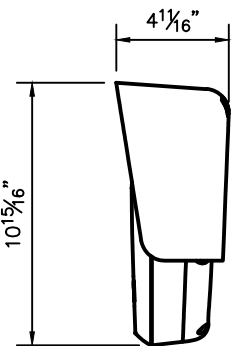
"PENGUIN" BATTERY PACK WEIGHT = 5 LB. (APPROX.)

"PENGUIN" BATTERY PACK

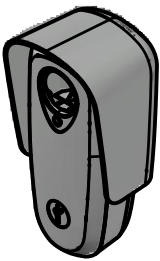
BATTERY PACKS TO BE MOUNTED BEHIND 60W SOLAR PANEL



FRONT



SIDE



ISOMETRIC

"FALCON" CAMERA WEIGHT = 5 LB. (APPROX.)

FLOCK SAFETY "FALCON" CAMERA

MOUNTING HARDWARE TO BE PROVIDED BY FLOCK SAFETY

flock safety

PROJECT INFORMATION:
STANDARD CONFIGURATION DETAILS (X-SQRD BREAKAWAY SYSTEM) AUTOMATIC LICENSE PLATE READER AND SOLAR PANEL SYSTEM

PLANS PREPARED BY:
Kimley»Horn
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PHONE: (404) 419-8700
WWW.KIMLEY-HORN.COM

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LICENSER:
WISCONSIN
MICHAEL R DOOLITTLE
E-46398
CARY, NC
PROFESSIONAL ENGINEER
11/15/2022

KHA PROJECT NUMBER:
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DRAWN BY: GJV CHECKED BY: MRD
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EQUIPMENT DETAILS
SHEET NUMBER:
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INSTALLATION GUIDE REDI-TORQUE MODEL 280 OMNI DIRECTIONAL SLIP BASE
(COMBINATION ANCHOR WITH LOWER SLIP PLATE). RECEIVES SQUARE SIGN SUPPORT

AMENDED PAGE 4 OF 6 X-SQUARED BREAKAWAY POLE DETAILS



PROJECT INFORMATION: _____

STANDARD CONFIGURATION DETAILS
(X-SQRD BREAKAWAY SYSTEM)
AUTOMATIC LICENSE
PLATE READER AND
SOLAR PANEL SYSTEM

PLANS PREPARED BY: _____

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LICENSER: _____

FOR REFERENCE ONLY

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SHEET TITLE: _____

EQUIPMENT DETAILS

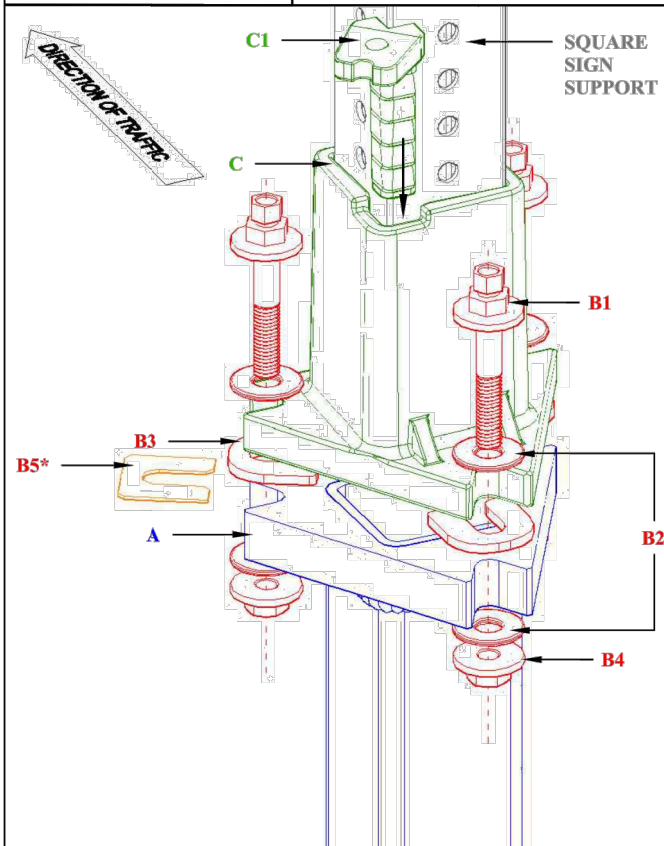
SHEET NUMBER: _____

S-3

INSTALLATION DETAIL PROVIDED FOR REFERENCE ONLY. CONTRACTOR SHALL ORDER AND INSTALL X-SQUARED PART #SB10C-278RD-G WITH ROUND RECEIVER THAT IS COMPATIBLE WITH THE SPECIFIED 2 7/8" Ø PIPE. CONTRACTOR SHALL CONTACT MANUFACTURER FOR INSTALLATION SPECIFICATIONS.

RT280U-SQ1 MASH-16 COMPLIANT FOR INTERSECTIONS and MAINLINE ROADWAYS
NCHRP 350 CRITERIA - FHWA ACCEPTANCE LETTERS SS-134 & SS-134A

August 13, 2021 XCESSORIES SQUARED DEV. & MFG. CO., INC. AUBURN, IL 62615
TEL: (800) 621-7948 FAX: (217) 438-3917 www.x-sqrd.com



PARTS LIST

A: Unibase - Lower Slip Plate

ITEM	QTY	DESCRIPTION
A	1	Combination Anchor/Lower Slip Plate

B: Redi-Torque Match Plate Hardware

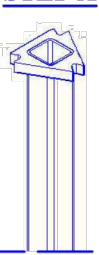
ITEM	QTY	DESCRIPTION
B1	3	1/2"-13 x 3" Gr. 8 Redi-Torque Bolt
B2	6	5/8" U.S.S. Flat Washer
B3	3	3/16" thick, Teflon Coated Slip Washer
B4	3	1/2"-13 Gr. 8 large diameter Flange Nut
B5*	0	1/16" thick Leveling Shim

* may not be necessary for every installation

C: Upper Slip Plate Sub-Assembly

ITEM	QTY	DESCRIPTION
C	1	Top Receiver for Square Sign Support
C1	1	Square Sign Support Locking Wedge

STEP A



1. Install appropriate Unibase (A) plumb & squared up with road, with point of triangular slip plate facing oncoming traffic.
2. Depth of embedment to leave 2-1/2" (+1 1/2" - 1/2") from grade to top of Lower Slip Plate of Unibase (A).
NOTE: For soil or concrete installation options, see details at lower left.
NOTE: If installing in concrete, auger the footing hole shallow enough to be able to drive 3-4 inches of Unibase (A) into the bottom of the hole. This will help stabilize the unit as concrete is being poured and cured while also allowing for proper drainage.
NOTE: On multi-leg installations, be sure that all Unibases are squared & lined up with each other.

STEP B



1. Place one each teflon coated Slip Washer (B3) on top of Lower Slip Plate of Unibase (A) at each notched point with open end of slot facing center of triangular slip plate. Leave enough room between the closed ends of the slot/notch to allow 1/2" Redi-Torque Bolt (B1) to pass through.
 2. Place Upper Slip Plate (C) onto the three Slip Washers (B3) properly indexed so that square post receiver portion is squared up with road.
 3. Slide 1 each 5/8" Flat Washer (B2) on to each Redi-Torque Bolt (B1) then insert Bolt (B1) with Washer (B2) down through notched points of Upper Slip Plate (C), slot of Slip Washer (B3) and notched point of Lower Slip Plate of Unibase (A).
 4. slide 1 each 5/8" Flat Washer (B2) up on exposed thread of each Bolt (B1) followed by threading 1 each 1/2" Flange Nut (B4) on to each Bolt (B1) one half turn past finger tight.
- NOTE:** When tightening bolts during this step use the 3/4" (larger) hex and NOT the 1/4" (smaller) hex.

STEP C



1. Insert Square Sign Support into Upper Slip Plate (C) receiver until support bottoms out.
2. With a hand held hammer, drive the square sign support Locking Wedge (C1) into the Upper Slip Plate (C) receiver at the pre-determined corner, marked by a 1/4" notch. (The Locking Wedge does not need to be driven flush with top of Upper Slip Plate receiver)
- *SHIMMING:** Before moving on to step 3, check the plumb of the sign support(s). If necessary, 1/16" thick Leveling Shim(s) (B5) may be used at the appropriate point(s) between slip plates. To replumb, loosen Bolt (B1) at desired point enough to lean the Upper Slip Plate (C) back and slide Leveling Shim (B5) into place. Shim(s) should be placed under Teflon Coated Slip Washer. Maximum of 2 each Leveling Shims per notched point.
3. After Locking wedge (C1) is securely in place, loosen each Bolt (B1) and Nut (B4), one at a time, then retighten each Bolt (B1), using the 1/16" (smaller) hex, until the 1/16" hex head twists off from the 3/4" hex head. This will set the proper torque level.

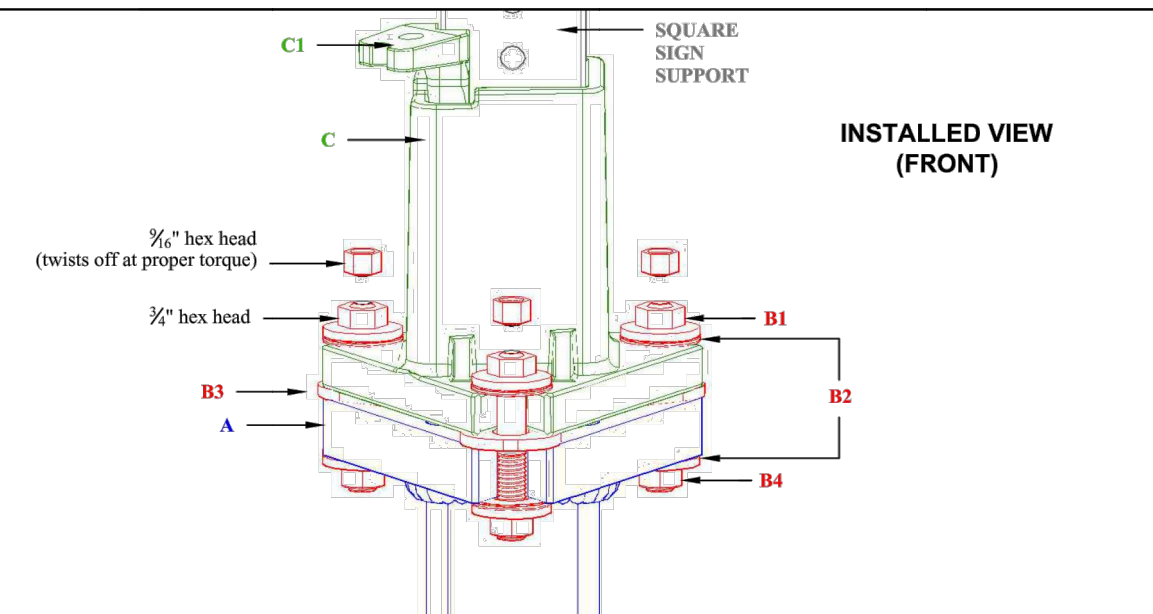
1. UP TO A MAXIMUM OF THREE OMNI DIRECTIONAL SLIP BASES WITH REDI-TORQUE MODEL 280 MATCHPLATE HARDWARE MAY BE INSTALLED WITHIN A SEVEN FOOT SPAN ON MAINLINE ROADWAY.
2. FOR ADDITIONAL WINDLOAD CAPABILITY, A POST OF THE NEXT SIZE SMALLER MAY BE INSERTED INTO THE SQUARE SIGN SUPPORT A MINIMUM OF FOUR FEET AT THE BOTTOM OF THE SUPPORT.

CONCRETE INSTALLATION DETAIL

NOTE: Recommended footing size a minimum of 12" in diameter and 30" deep.

DIRECT DRIVEN SOIL INSTALLATION DETAIL

NOTE: Install with the widest bearing surface of the stabilizing wing parallel with the face of the sign.



- REINSTALLATION PROCEDURE:**
- NOTE:** All match plate hardware components are generally reusable except the Redi-Torque Bolts (B1)
1. Remove sign support Locking Wedge (C1) from Upper Slip Plate (C) receiver with a hand held hammer.
 2. Place Upper Slip Plate (C) on Lower Slip Plate of Unibase (A) to check for warpage and level of slip plates.
 3. Visually check all welds and castings for fractures or other damage.
 4. When assured both Lower Slip Plate (A) and Upper Slip Plate (C) are reusable employ new or reused hardware (B) with NEW Redi-Torque Bolts (B1) then follow installation procedures, starting with STEP B.

FOUNDATION DESIGN NOTES

1. FOUNDATION DESIGN REACTIONS ARE BASED ON INTERNAL CALCULATIONS BY KIMLEY–HORN. ANALYSIS CRITERIA CAN BE FOUND ON SHEET S–1.
2. FOUNDATION MAY BE CAST–IN–PLACE, OR PRECAST.
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI

3.A. MIX DESIGN TO BE IN ACCORDANCE WITH ACI 318, CHAPTER 26

3.B. COARSE AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33 SIZE #57

3.C. COLD WEATHER PLACEMENT SHALL COMPLY WITH ACI 306.1

3.D. HOT WEATHER PLACEMENT SHALL COMPLY WITH ACI 305 R
4. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 1"
5. CONTRACTOR SHALL VERIFY THAT THE PROPOSED FOUNDATION CAN BE BUILT AS SHOWN. CONTRACTOR SHALL OBTAIN EOR APPROVAL FOR ANY CHANGES TO THE PROPOSED DESIGN.
6. CONTRACTOR SHALL FIELD VERIFY THE PRESENCE OF GROUNDWATER IN THE TOP 10–FT OF SOIL PRIOR TO CONSTRUCTION. IF GROUNDWATER IS ENCOUNTERED, ONE OF THE FOLLOWING METHODS SHALL BE IMPLEMENTED:

6.A. THE CONTRACTOR SHALL PUMP EXCESS WATER OUT OF A BORE HOLE THROUGHOUT INSTALLATION PROCESS.

6.B. THE FOUNDATION MAY BE INSTALLED INSIDE INSIDE OF A SONOTUBE THAT EXTENDS TO THE FULL EMBEDMENT DEPTH. SOIL BACKFILL SHALL BE PROPERLY COMPACTED TO A MINIMUM OF 95% OF STANDARD MAXIMUM DENSITY (ASTM D 698, 100 PCF MINIMUM).

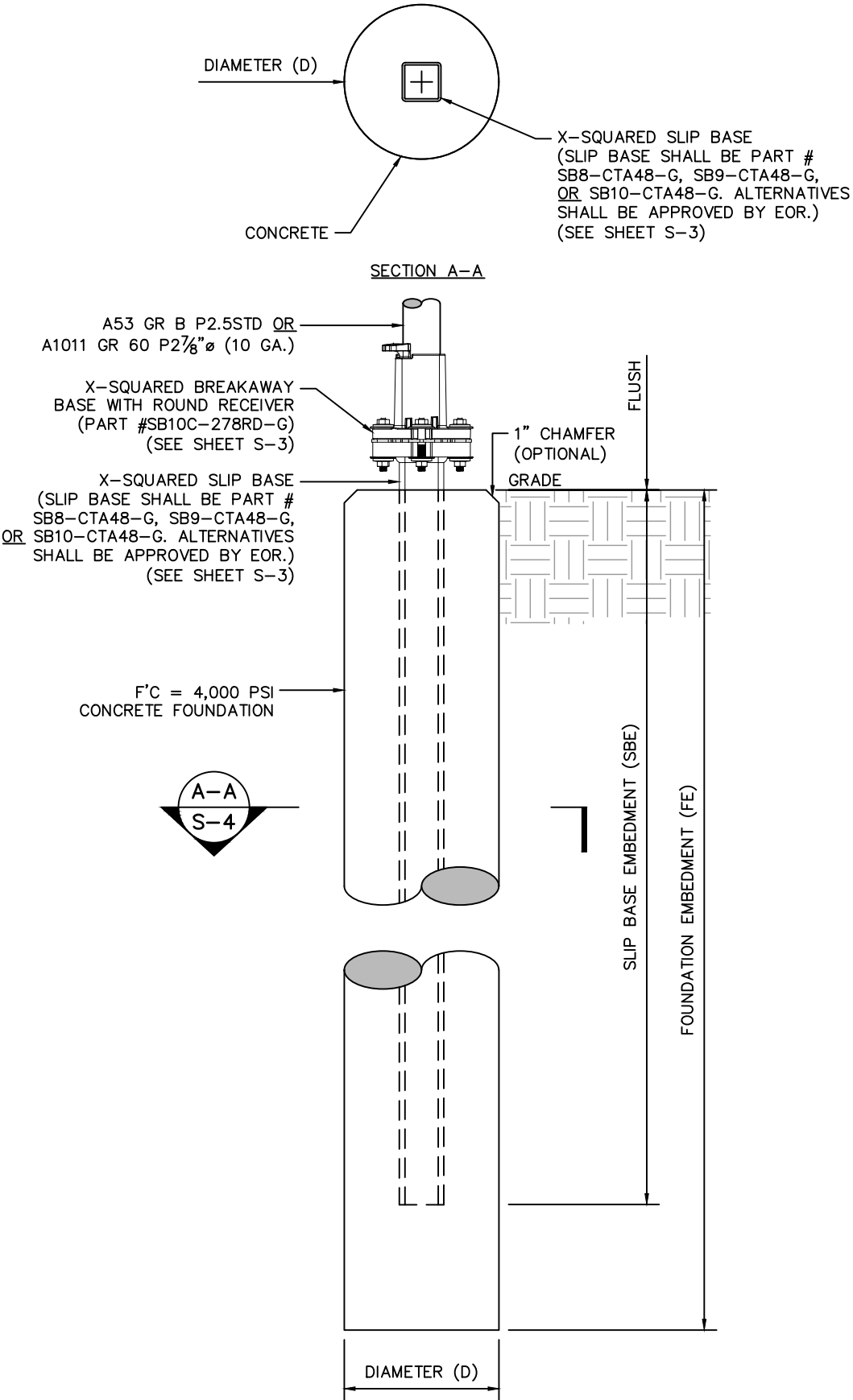
6.C. A PL $\frac{1}{4}$ " TEMPORARY CASING MAY BE USED DURING INSTALLATION. THE CASING SHALL BE EXTRACTED AS THE CONCRETE IS PLACED SUCH THAT A HEAD OF CONCRETE IS MAINTAINED ABOVE THE BOTTOM OF THE CASING TO PREVENT WATER INTRUSION INTO THE CONCRETE MIX.

FOUNDATION DESIGN TABLE		
DIAMETER (D)	FOUNDATION EMBEDMENT (FE)	SLIP BASE EMBEDMENT (SBE)
12"Ø (SEE NOTE 2.1)	5'–0" (SEE NOTE 2)	3'–3" (MINIMUM)

DESIGN TABLE NOTES:

1. DRAWINGS DENOTE A GENERIC FOUNDATION CONFIGURATION AND ARE NOT TO SCALE. REFER TO FOUNDATION DESIGN TABLE FOR DETAILS.
2. FOUNDATION EMBEDMENT (FE) SHALL BE THE MAXIMUM OF THE DIMENSIONS SPECIFIED, OR 6" BELOW THE FROST DEPTH APPLICABLE TO THE SITE LOCATION. CONTRACTOR SHALL VERIFY FROST DEPTH PRIOR TO CONSTRUCTION. SEE SHEET R–1 FOR ADDITIONAL INFORMATION.

2.1. FOR FOUNDATION EMBEDMENTS (FE) THAT EXCEED 6'–6" TO ACHIEVE FROST DEPTH REQUIREMENTS, THE FOUNDATION DIAMETER SHALL BE 16"Ø.



1 FOUNDATION DETAIL
S-4 SCALE: N/A

flock safety™

PROJECT INFORMATION: _____
STANDARD
CONFIGURATION DETAILS
(X-SQRD BREAKAWAY SYSTEM)
AUTOMATIC LICENSE
PLATE READER AND
SOLAR PANEL SYSTEM

PLANS PREPARED BY: _____
Kimley»Horn
817 WEST PEACHTREE STREET,
NW, SUITE 601,
ATLANTA, GA 30308
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REV: _____	DATE: _____	ISSUED FOR: _____	BY: _____
8			
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1			
0	11/15/22	CONSTRUCTION	MRD

LICENSER: _____

11/15/2022

KHA PROJECT NUMBER: _____
014681000
DRAWN BY: _____ CHECKED BY: _____
GJV MRD

SHEET TITLE: _____
**FOUNDATION
DETAILS**
SHEET NUMBER: _____
S-4

K:\RAL_Wireless\Flock_Safety\KHRAL-18537 (WI) (X-Squared)\CAD\FLOCK_POLE_DETAIL_XSQRD_R0.dwg 11/15/22 4:35 PM by: greg.vanmaaren

FROST DEPTH NOTES

1. ESTIMATED FROST DEPTHS FOR VARIOUS COUNTIES ARE LISTED IN THE PROVIDED TABLES.
2. CONTRACTOR IS RESPONSIBLE FOR VERIFYING FROST DEPTHS WITH THE LOCAL JURISDICTION REQUIREMENTS.



State	County	Design Frost Depth (in.)
WI	ADAMS	70
WI	ASHLAND	80
WI	BARRON	80
WI	BAYFIELD	80
WI	BROWN	60
WI	BUFFALO	80
WI	BURNETT	80
WI	CALUMET	60
WI	CHIPPEWA	80
WI	CLARK	70
WI	COLUMBIA	60
WI	CRAWFORD	70
WI	DANE	60
WI	DODGE	60
WI	DOOR	60
WI	DOUGLAS	80
WI	DUNN	80
WI	EAU CLAIRE	80
WI	FLORENCE	70
WI	FOND DU LAC	60
WI	FOREST	70
WI	GRANT	60
WI	GREEN	60
WI	GREEN LAKE	70
WI	IOWA	60
WI	IRON	80
WI	JACKSON	80
WI	JEFFERSON	60
WI	JUNEAU	70
WI	KENOSHA	60
WI	KEWAUNEE	60
WI	LA CROSSE	70
WI	LAFAYETTE	60
WI	LANGLADE	70
WI	LINCOLN	80
WI	MANITOWOC	60
WI	MARATHON	80
WI	MARINETTE	60
WI	MARQUETTE	70
WI	MENOMINEE	70
WI	MILWAUKEE	60
WI	MONROE	70
WI	OCONTO	60
WI	ONEIDA	80
WI	OUTAGAMIE	70
WI	OZAUKEE	60
WI	PEPIN	80
WI	PIERCE	80
WI	POLK	80

AMENDED PAGE 6 OF 6 X-SQUARED BREAKAWAY POLE DETAILS

State	County	Design Frost Depth (in.)
WI	PORTAGE	70
WI	PRICE	80
WI	RACINE	60
WI	RICHLAND	70
WI	ROCK	60
WI	RUSK	80
WI	SAINT CROIX	80
WI	SAUK	70
WI	SAWYER	80
WI	SHAWANO	70
WI	SHEBOYGAN	60
WI	TAYLOR	80
WI	TREMPEALEAU	80
WI	VERNON	70
WI	VILAS	80
WI	WALWORTH	60
WI	WASHBURN	80
WI	WASHINGTON	60
WI	WAUKESHA	60
WI	WAUPACA	70
WI	WAUSHARA	70
WI	WINNEBAGO	70
WI	WOOD	70

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PROJECT INFORMATION:

STANDARD
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LICENSER:



KHA PROJECT NUMBER:

014681000

DRAWN BY: CHECKED BY:

GJV

MRD

SHEET TITLE:

FROST DEPTH
REQUIREMENTS

SHEET NUMBER:

R-1